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Q1 The Chairman: Governor, thank you very much for joining us this afternoon. I gather you would like to make a brief opening statement.

Dr Mark Carney: Thank you very much, Chairman, and good afternoon. I would like to thank you first for this opportunity to testify; it is a central part of our accountability framework and I look forward to the discussion.

I would like to begin with a few comments on what the Bank has been doing to promote monetary and financial stability. Starting with UK inflation, it has fallen to its lowest level since the advent of inflation targeting two decades ago. It will likely fall further to around zero in the coming months and remain there for much of the rest of the year. As a consequence, I have written the first open letter from a Governor to a Chancellor to explain why inflation is so low and what the MPC intends to do about it. I will likely have to write a few more before the year is out.

The majority of the weakness in inflation reflects falls in energy and food prices, particularly the sharp fall in the price of oil. Commodity prices do not, however, wholly explain weak inflation. Core inflation is running at about 1.5%. This reflects a long period of muted wage growth and the remaining degree of slack in the economy, which we currently estimate to be in the region of half a percentage point.

The MPC’s job in these situations is to clarify the horizon over which it aims to bring inflation back to target and then take the necessary actions to do so. We are seeking to return inflation to target as quickly as possible, after the effects of energy and food price
movements have abated. In the MPC’s judgment, it is appropriate to do so within the next two years, and the dynamics of the UK’s economy are consistent with this objective. Output growth remains solid, at a little above 2.5%, and domestic demand growth is robust. The labour market continues to strengthen: unemployment has reached its lowest level in more than six years; 600,000 new jobs have been created over the past year; the average hours worked continue to recover on a strong upward trend; the number of people working is at a record high; and as the margin of slack in the economy narrows, there are increasing signs that wages and unit labour costs are beginning to pick up.

The combination of rising wages and weak headline inflation will strengthen household finances and boost, we think, real take-home pay growth this year to its fastest rate in a decade. In turn, this should support continued solid growth in consumer spending. As demonstrated by the recent Bank of England stress tests, the core of our financial system is increasingly resilient. Access to credit continues to improve and many borrowing rates are at or near historic lows. Against that backdrop, surveys point to robust investment intentions outside the extraction sector. According to the Bank’s latest economic forecast, a gently rising path of bank rate is likely to be consistent with eliminating the remaining slack in the economy and thereby ensuring that inflation returns to target within two years.

The MPC recognises that a prolonged environment of low interest rates could create financial stability risks, which threaten its secondary objective of supporting strong, sustainable and balanced growth. As a consequence, it is working closely with the FPC, sharing analysis and conducting a series of joint meetings to compare perspectives on the risk to medium-term stability. The FPC is the first line of defence against such risks. The FPC’s remit, bestowed by Parliament, is to identify, monitor and take action to remove systemic risks in order to protect and enhance the resilience of the UK financial system. While there are considerable global risks, including geopolitical flashpoints, ongoing strains in the euro area and the possibility of dislocations from the widespread mispricing of liquidity risks, these are generally beyond the scope of UK monetary and macroprudential tools. These risks do, however, put a premium on ensuring that the core of our system is resilient to shocks, and I will address this in a moment.

Closer to home, the legacy of high indebtedness and structural imbalances in the UK economy means that there are risks that, if left unchecked, could undermine the durability of the expansion. The biggest medium-term risks in this regard relate to the housing market. Last year, the FPC took graduated and proportionate action to mitigate these risks, the risks
specifically of a build-up of unsustainable levels of debt and credit growth. To be clear, the FPC does not currently believe that household indebtedness poses an imminent threat to stability. Bank underwriting standards are more responsible than they were in the past, but time and again this country has seen how quickly responsible can turn to reckless, creating imbalances that ultimately destabilise the economy.

As a consequence, the FPC has taken out insurance against such risks by introducing a new affordability test to ensure that households can continue to meet their mortgage repayments even if interest rates rise and by setting a cap on the proportion of highly geared new residential mortgages. These measures were deliberately calibrated so they would not constrain existing housing market activity, but rather prevent an erosion in underwriting standards, which could have broader macroeconomic consequences.

Given the legacy of the crisis, the risks I just described from housing and the risks from abroad, the Bank has continued to work to strengthen the resilience of the UK banking system. Since last summer, there have been two major structural milestones. First, the Government are taking steps to give the FPC powers of direction over a leverage ratio. Secondly, the Bank helped the G20 achieve a watershed in ending the scourge of too-big-to-fail banks, as G20 leaders endorsed the proposal for total loss-absorbing capacity, or TLAC, at the Brisbane summit. Once implemented, TLAC could effectively double the private capital available to resolve a globally systemic bank.

Last year, the FPC and the PRA board conducted the first concurrent stress test of major UK banks by stressing their ability to withstand a severe housing market shock. The results and the related capital actions demonstrate that the core of our system is much more resilient than prior to the crisis. Collectively, the banking system was found to be strong enough to continue to lend to households and businesses, even during a severe stress. We will conduct another stress test this year with greater focus on international risks.

Having taken action to deal with the immediate aftermath of the crisis, the Bank is now broadening its work to address new and evolving risks. We are particularly focused on those involving misconduct in financial markets, where the fair and effective markets review will make recommendations in the summer, as well as on risks that could be built up through the provision of market-based finance.

Throughout all our actions, the Bank has sought to increase the transparency of our decision-making processes and our actions. Since I last appeared before this Committee, we have announced the most significant set of changes to how we present and explain interest
rate decisions since the MPC was formed in 1997. Specifically, following the recommendations of the Warsh review, we will publish both the minutes of the MPC policy meetings, and in the relevant months the inflation report, at the same time as the MPC policy decisions, starting from August of this year. We will also publish complete transcripts of our decision meetings with an eight-year lag. We have also enhanced the transparency of our governance by publishing the minutes of court meetings for the crisis period 2007-09, and by bringing the publication of historical court minutes within our new archive policy, aligning us with best practice in Whitehall. We are opening up our historic data sets and actively encouraging their use by outside researchers and commentators, and we have completely overhauled our market intelligence function to make it more open and transparent, including by publishing a market intelligence charter.

The Bank recognises that it should be held to the highest standards. When we fall short, we will review the circumstances, draw on the lessons learnt and publish the results in as timely a fashion as possible. Recent examples include the Grabiner report and the forthcoming review of the RTGS outage. We welcome opportunities such as this to account for our activities to Parliament and, through Parliament, to the people of the United Kingdom. Thank you for that, Chairman.

Q2 The Chairman: Governor, thank you very much. We will return to a number of those points in the questioning session. Could I perhaps ask the first question, and before doing so can I declare an interest as a senior adviser to Jefferies Inc, a US investment bank?

In the light of changes that were made to the allocation of capital for certain types of lending at the end of last year, it has been suggested that banks will either have to shrink their current loan book, because of the requirement to have additional capital, or to raise additional capital. Obviously that is quite difficult in markets where most banks are trading at less than book. Are you concerned that this will lead to a contraction of lending capacity, particularly for SMEs and in the mortgage market?

Dr Mark Carney: Thank you for the question. Any question around capital has many facets, as you can appreciate and this Committee appreciates. In the very short term, there have been limited changes to the actual capital rules. There has been guidance from the Bank on the leverage ratio which, as I referenced in my opening remarks, is going through the parliamentary process, so there is greater clarity around what the leverage ratio is likely to be, but it is not yet in force. There have been the consequences of the stress-testing process, which, for the eight largest institutions in the country, inform them of the adequacy
of their capital base for a severe shock and, for some of them, had capital consequences, which they either have addressed or in one case are in the process of addressing.

There are a series of discussions at still a relatively low level at the Basel committee about potentially introducing greater use of standardised models for the capital calculation. In the case of risk for which there is substantial information and good default history, there is relatively limited variability in those risks, which are most suited for a standardised model. I would think that sovereign debt or high-grade corporate debt would be two obvious examples, but not SME debt though, because that is where SME debt and, quite often in the case of mortgage debt, the true banking function and true banking expertise come to pass: the ability to make judgments around information that in often cases is available just to the institution. We still operate under a system in Europe where the capital treatment for SME lending is more favourable than the global Basel standard capital treatment for SME lending, so that continues to provide some advantages.

Bringing that all together, if I may, I would say that the lesson that we have taken from the experience in the United Kingdom and in other countries has been that we have gone through the post-crisis period where what has held back lending has been the inadequacy of capital, as opposed to excess of capital, in the system. The progress that has been made very much by my predecessors at the Bank of England really broke the back of this, but we have looked to continue, through processes such as the stress-testing process, which we have just completed, moving the United Kingdom system as a whole into one where capital is adequate to lend. The pockets of the economy that still do not have pre-crisis availability of capital will see it over time. My point would be that at this stage the steps that we have taken have enhanced the availability of credit to the economy, at least for the UK.

The Chairman: Will that credit be available at a rather higher price, because of the need to allocate more capital to it and obviously the increased costs of regulatory requirements?

Dr Mark Carney: That is extremely on point. Higher capital is required, and higher liquidity is also required for the institutions. As with any commercial institution in a competitive market, those costs will ultimately be passed on to the end customer. The question becomes: in an economy with the same inflation target—2%, one would hope; maybe we will talk about productivity later—but the same relative potential growth of the economy, how do the end costs to firms and households adjust in that environment? Part of the answer is where the risk-free rate goes.
One of the points we have made—and I think people may be getting a little tired of this, but I am going to make it again—is that we expect interest rate increases, when they happen, to follow a gradual path and rise to a limited extent. There are many reasons for the word “limited”, but one of the reasons is exactly your point, which is that we think there is going to be a higher intermediation spread, the cost of capital and the greater cost of liquidity, that will be passed on by banks, so that the net cost to the borrower is the same. It may not be the same as the pre-crisis excess, but it will be the same as it should have been maybe in the mid-2000s, mid-1990s, so it is the same level. The risk-free rate is likely to be lower; we adjust the risk-free rate lower. That is consistent with achieving the inflation target. It is consistent with getting credit to the firms and households that merit it, that need it and that can put it to work. It is consistent with the economy growing with potential.

**The Chairman:** To be clear, none of the banks have signalled to you that the changes in the capital allocation requirements will cause them to reduce the level of lending to either SMEs or the mortgage market.

**Dr Mark Carney:** I would say that my experience throughout the period of post-crisis reform is that for any measure that is debated, there is a bank or a series of banks that say, “The SMEs are going to get it if you do X”. The experience has been that in most cases those have been hollow threats. That does not mean that that is not always the case. That does not mean that there may not be things that we have done that we should not correct and fine-tune, but I stand by what I said earlier: the experience in the UK, the US, Canada and Australia, and perhaps finally with the stress tests and the AQR process in Europe—we will see—once you re-capitalise the core of your system, once you get them into a position where they are not living hand to mouth and relying on effectively the implicit backing of the state, they go out and do their job and they lend to the real economy. We are starting to see that here.

**Q3 Lord Lawson of Blaby:** May I come on to the question of inflation, which you mentioned in your remarks, Mr Governor, which is round about zero, with stable prices, and likely to remain so for a little while? You mentioned the 2% target. You also mentioned earlier that you were not at all concerned about a short period in which inflation went below zero, so it was technically deflation. May I say that I think you are absolutely right about that and that there is a certain amount of hysteria among some commentators because of the novelty and a total misreading of the 1930s? I know that the 2% target is what you have to follow by statute, but is it not slightly absurd now? It means that you are
indifferent between stable prices—zero—and 4% inflation. Are you indifferent between these two?

**Dr Mark Carney:** I would put your statement in a slightly different light. We care as much about inflation below target as we do above. Given the remit given to us by Parliament, our job is to get inflation back to target, whether from below or above.

**Lord Lawson of Blaby:** Are you saying that you are as concerned now about the inflation being zero, which it is approximately, as you would be if it were 4%?

**Dr Mark Carney:** As you said, Lord Lawson, in your opening remarks, we are looking through the current low level of inflation, because it is largely caused by temporary factors. We can boil it down to a 50% fall in the price of oil and the knock-on effect to petrol. Food and energy prices, as we get into the second quarter of this year, will probably account for about four-fifths of the gap between where actual inflation is and targets, so it is largely caused by that. We can look through that because, as you can appreciate, it is a one-time adjustment and then the economy moves on. It is out of the price level a year from now. That is where we look through; that is where we are indifferent. We are not indifferent to the prospect of inflation being at zero over the horizon over which we can affect it. We are not indifferent if we felt that inflation were going to be 0% in two years or three years from now or, for that matter, if it were to be 4% over the same time period. That is the horizon over which we can affect inflation and we would take action.

**Lord Lawson of Blaby:** Although you are given the 2% target by Parliament—it is the same in Europe and so on—and therefore you have to respect it, you have a discretion as to how fast you try to get back to this target. Do you not agree that it would be very foolish to be in a hurry to boost inflation?

**Dr Mark Carney:** Absolutely. That is one of the key judgments that the MPC has to make, and we were very transparent in our letter to the Chancellor about over what horizon we think we should return inflation to target. The one thing we cannot do and the thing that would be extremely foolish is to try to lean against this oil price fall today to try to provide extra stimulus to somehow get inflation up at this point in time. The impact of that extra stimulus—and you managed monetary policy; you know this—would happen well after the oil price fall had moved through the economy and we would just add unnecessary volatility to the inflation. That would be foolish. We are looking through and beyond. We have to be vigilant, though, to the possibility that a period of low prices, particularly prices that the British consumer sees frequently, certainly on a weekly basis if not every day,
on food and energy, start to change expectations, which is why we welcome conversations like this: so that we can make clear that we understand our remit. We are going to bring inflation back to 2% over the medium-term horizon, within two years, and we have the ability to do so. If I may add just for clarity, we think that bringing inflation back over that horizon is consistent with, as I said in my opening remarks, a gently rising path of interest rates.

**Lord Lawson of Blaby:** Just coming back to one last question on the deflation issue, it is not just a question of the oil price and so on, which you have gone into and I fully agree with you; it may be that, for example, technological developments will bring a lot of prices down. We know, for example, that computers have got cheaper and cheaper, and this process might be more widespread. Do you see that as a cause for concern? I must say that I do not.

**Dr Mark Carney:** I would add to your list, if I may, or to the applications of computing and automation technology. There is evidence, and the question is how widespread it will become and how persistent it will become, that the automation of what we used to think of as quite high value-added tasks can be routinised, particularly in the service sector. This will keep wage inflation down for longer and have more persistent low wage inflation, and as a consequence a headwind against inflation, which will persist not as a one-time shock but for a period of time. Under our remit, we need to identify that and lean against that in order to offset it so that overall prices are rising consistent with the 2% target.

If I may, it is a useful time to stop and ask why we have a 2% target instead of a 0% target. In general, there are a few dynamics that are relevant here. The first is that the dynamics of labour markets have been that there is still great reticence, even in a labour market as flexible as the UK’s, for wages to outright fall. People tend to adjust wages over time by the real wage falling through some level of inflation over time. Secondly, certainly in an economy that still has debt that is 130% of income, the risks around debt deflation or even debt disinflation—in other words, the real value of that debt increasing because of too low a generalised rise in prices and wages—is a severe one that could feed back into overall economic outcomes.

With all of that said, and I am in the purely hypothetical now, if it were identified that we were in a period of a prolonged supply shock, which had positive productivity implications, whether it is computing, whether it is through different aspects of globalisation and other factors, there might be a case for adjusting the level of the inflation target, but that is a sober
adjustment that is made by the Government over time, through public debate, as opposed to a reaction—not that you are suggesting a reaction—to temporary deviations in inflation.

**Lord Lawson of Blaby:** So you might think about going down, for example, from 2% to 1%.

**Dr Mark Carney:** That would be the discussion. Just to be clear, I am not advocating that discussion. I would not say, as we sit here today, that we see that form of early 2000s-type sustained productivity shock. It was a productivity shock, but also a positive manufacturing supply shock, because of the integration of China. We do not see that. Of course, we can see that much better with the wisdom of hindsight, which is part of the challenge. We do not see that here today and in no way are we advocating a change in the inflation target. We are clear on what our mandate is and we will take the steps necessary to achieve it. To repeat myself, our judgment at this stage, and certainly my judgment, will likely include limited and gradual increases of interest rates over the next few years.

**Q4 Lord Carrington of Fulham:** Before I ask my question, can I declare my interest? I am a non-executive director and deputy chairman of Gatehouse Bank.

Ben Bernanke is a bit sceptical about quantitative easing. He says that it works in practice but does not work in theory. Is there any evidence that it has worked in practice in the UK?

**Dr Mark Carney:** Yes. Former Chairman Bernanke was sceptical about the theoretical aspect of it or anxious to develop the theoretical aspect, but he was not sceptical about the application of QE, as you well know. He was not, because his experience and the evidence in the United States and in the United Kingdom is that it has had a positive effect on both growth and inflation. Our estimate at the Bank of England of the peak impact on GDP—and they are directionally correct, although I would not be overly precise about them—is about 2.5 percentage points of GDP for the asset purchases performed by the Bank of England, and about 1 percentage point on inflation.

If I may take one second, the theoretical challenge that the economics discipline faces, and central bankers as practitioners—and it sounds slightly ridiculous—is that the core workhorse models of central bankers still have very primitive financial sectors embedded in them, if at all. Since QE works particularly through asset price channels—there is some expectations effect and some signalling effect, but it really works through asset price channels—the structure and core forecasting models do not adequately capture it. We have done our estimates of it and I have just given you the figures for it.
I would say that my personal view, shared by many colleagues, is that QE is more effective, asset purchases are more effective, in markets that are dislocated or under severe strain than in more normal times, as at present. My personal preference is to use the nominal interest rate as the marginal tool of monetary policy.

**Lord Lawson of Blaby:** May I ask a supplementary on that? Clearly you just reiterated what you told us when you were last before us—consistency is admirable—that you would foresee a gently rising interest rate, but not an unwinding of QE. If you are not going to unwind QE, since the Bank of England is wholly owned by the state, QE is just the state buying back its own debt. When a company buys back its debt, that is just cancelled out. Why do you not do that between you and the Treasury and so reduce the headline figure for the national debt?

**Dr Mark Carney:** The challenge is that we would lose control of the monetary supply.

**Lord Lawson of Blaby:** That cannot be so.

**Dr Mark Carney:** It can be so, because we have purchased QE by dint of creating additional central bank reserves at banks, so we are going to cancel the asset; we have the offsetting liability. Ultimately, the endogenous credit creation process, the money creation process through banks, will normalise and pick up. We will want an ability to pull some of those reserves, and it is a question of judgment of how much of those reserves, back out from the banking sector. We will not have the offsetting assets to take them back and the only way we can take them back is to compound the problem. There is no free lunch in this. There is a recycling of the income of QE, which is what is happening with the arrangements of the Government, but there is no ability to outright cancel.

**Lord Lawson of Blaby:** But this is a book transaction. It would not have any real effect. If you wanted to do what you have just suggested a moment ago, you can still do it. It is what in my day as Chancellor was known as overfunding. You can always do that.

**Dr Mark Carney:** I think we are going to have to agree to disagree. Having £397 billion of liabilities without corresponding assets, as a banker, causes me grave concern.

**Q5 Lord Carrington of Fulham:** If I could just come back for one last question, quantitative easing undoubtedly produces distortions in the market. I quote one criticism, from John Kay, who says that those with assets benefit at the expense of those without, which is a fairly common criticism of quantitative easing: that it makes some people extremely wealthy and some people suffer quite considerably from it. Is that your view, or do you think it is more benign than that?
Dr Mark Carney: The first thing is to recognise that all monetary policy creates distortions or redistributions between debtors and creditors, and that the provision of QE does not match exactly the distortions that are created by conventional monetary policy, but we have certainly made a large effective redistribution in favour of debtors over the course of the last seven years by having interest rates as low as they could possibly be.

In terms of the redistributive implications of QE, I would say two things. The first is that, to the extent that QE is effective in providing stimulus to the economy and growing the economy, the net benefit of it includes avoiding deflation and the impacts of deflation, which again would hurt debtors more. Also, in its way—and I would not take this point too far, but it has been true in the UK—it supports the labour market and job growth, and one of the biggest causes of inequalities is being out of work. The big danger, in the face of the aftermath of the crisis, was hysteresis: the fact that large swaths of the population would lose attachment to the labour force. The one thing that has happened in the United Kingdom for a variety of reasons, but I would include very stimulative monetary policy, including QE, has been that actual participation in the UK labour market has gone up. It held up and has gone up further, which improves inequality.

The last point on redistribution and distortions is that, to go back to the general, which is true—monetary policy creates these impacts—questions of distribution are rightly choices for Governments and Parliaments which they can address as appropriate.

Lord Griffiths of Fforestfach: Chairman, I wonder if I could ask one quick final question on QE. I have to declare my interest as a member of the boards of Goldman Sachs International and Goldman Sachs International Bank. As you pursue QE, and if you think there is more potential in it, to what extent do you feel that because you are driven to buy more and more risky assets and private sector liabilities, you compromise the independence of the central bank and become open to the charge that you really are pursuing a sort of fiscal policy through monetary means?

Dr Mark Carney: There are a few things. First, for the avoidance of doubt—I know, Lord Griffiths, that you are in no doubt about this—we are not pursuing additional QE; we are merely reinvesting the assets in the asset purchase facility, as they mature, in a similar duration as that for the existing debt of Her Majesty’s Government, to try to be as market-neutral as possible. We do not have any outright private assets that we own. We provide the liquidity against private assets, but we do not own them outright.
Certainly in those monetary areas where additional QE is being pursued—Japan would be an example—there is a move into purchase of some private assets. The general principle, if that ever were necessary elsewhere, for example in Europe with the asset-backed purchases, is to devise transparent rules upfront that are as market-neutral as possible. They are not picking sectors; they are not picking certain durations or in any way making any element of a credit allocation decision more than necessary.

The last point I would make on it, though, is that the experience in the whole has been that by moving out the yield curve and taking duration out of the government market, the so-called portfolio balance effects of QE, the spill-over effects of QE, the displacement of those investors—those investors go to riskier assets; they either go further up the government curve or they move over into corporates, asset-backs, equities, or very often into foreign assets and, therefore, the exchange rate channel comes into play—there is normally considerable room within the risk-free basket.

Q6 Baroness Wheatcroft: Governor, you said that QE works most effectively in markets where there is dislocation, and there is no mistaking the dislocation in Europe at the moment. But the announcement of a spate of QE in the eurozone has sent the euro plummeting against sterling. I wondered what you thought the implications were for the UK, given that the eurozone is our biggest trading partner.

Dr Mark Carney: The first thing I would say is that we welcomed the decision of the European Central Bank to engage in quantitative easing for a few reasons. The first reason is just the fact that they are willing to do it and there was a unanimous acknowledgement that it was a legitimate tool of the ECB, as it was a legitimate tool of any other G7 central bank. That is particularly relevant in the context where, as I alluded to in my opening statement, there remain some strains in the euro area and the importance of having a comprehensive toolkit for the ECB is paramount. It removed that element of uncertainty; that is the first point. I stress that in part because the net benefit to the United Kingdom includes the reduction of a tail-risk event in Europe, the reduction of a very bad outcome in Europe, which is something that weighs on our minds in terms of financial stability and, I think it is fair to say, weighs from time to time on the minds not just of participants in the financial sector here but of businesses. Reducing that risk is important.

The second thing is that our estimate, again caveated because these are imprecise, is that the net impact of the additional €1 trillion of QE of the ECB would be in the order of just under one percentage point of GDP over the course of the next three years or thereabouts. That
is obviously good news for us as exporters and good news for us as one of the largest investors in the EU. I would remind you that of our 6% current account deficit, about half is caused by a deterioration in our net investment returns, largely because of lower returns in Europe, so this is good news. As you rightly reference, though, there is a potential offset through the exchange rate. It obviously depends where it goes. We still think that it is net positive for the UK. I would just reiterate my first point, which is that greatly reducing that tail risk from Europe in the near future provides additional benefit in that regard.

Baroness Wheatcroft: You talked about QE as part of a comprehensive toolkit for dealing with the problems of the eurozone. I wonder whether you think debt forgiveness in any way should be part of that toolkit, bearing in mind that Germany has been the beneficiary of debt forgiveness on quite a big scale.

Dr Mark Carney: I will go back to my answer to Lord Lawson and speak only of central banks. As a central bank, the ECB has considerable exposure to a series of euro-area Governments. I would not advocate debt forgiveness to the ECB, if I can limit it that way.

Q7 Lord Griffiths of Fforestfach: Mr Governor, turning to productivity growth, it is important because it ultimately drives a higher standard of living. Since the crisis, productivity growth in the UK has been quite weak. The Bank, in your recent inflation report, is quite bullish about where it is going to get to in 2016 and after that. It is going back to its historic average. I wonder if you could explain the reason for your optimism.

Dr Mark Carney: I would say that, first, in terms of full disclosure, our expectations of a pick-up in productivity growth have been consistently disappointed and we have steadily revised down both our timeline and our terminal point for productivity growth. Whereas two years ago we would have expected by the end of the forecast a rise of productivity growth, so it would have been back at its historic average—it depends on where you pick the average, but we would have pinned that at around 2.25 percentage points a year—with our latest forecast, despite the fact that the financial sector is in better shape, businesses are running at closer to fuller capacity, and investment has picked up, we only have productivity growth coming back to about 1.75% by the end of the forecast once we get into 2017. We are nowhere near as optimistic as we were previously and we are—I think you would expect me to say this—pretty balanced given that some of the necessary contributors to improved productivity growth are in place.

To be specific about those, there is always a cyclical element to this. As businesses expand production, with benefits of economies of scale and scope, the true operating leverage of
businesses, you get a pick-up in productivity. We are now seeing a pick-up in births and deaths of companies, which is positive, and job sharing in the labour market. People are now taking risk and moving jobs. Again, that is positive for productivity; you are getting a recycling of capital and labour. That is positive for productivity. We have the investment pick-up itself. We are now seeing near double-digit investment growth. We obviously have an adjustment, as all Members would know, in the oil extraction sector, a pretty sharp adjustment. Away from that, investment intentions remain strong, and our read of all indicators, including our agent surveys, is that despite the very short-term data around investment, investment continues to be growing solidly. All those factors should contribute to that pick-up in productivity. I have an appeal to broader issues of the gap between measured productivity in the UK versus a higher productivity economy, so there is still a fair bit of catch-up and application of other existing technology.

**Lord Griffiths of Fforestfach:** I was very disappointed by the Office for National Statistics' evidence. I think the latest report is 2013. If you look at that and ask how much of productivity is accounted for by growth in labour and growth in capital, and then ask how much the residual is that is really driving it, that residual turns out to be very small. To really get productivity growth moving, you mentioned a few things that are important. If you look at the slightly longer term, such as 2017, do you see the dynamism of our economies slowing down, or do you think it is there?

**Dr Mark Carney:** It is a profound question and it is the right question. The relatively limited pick-up in total factor productivity, if it sustains the residual, would be a concern. I have to say that I find it hard to see. There are a few structural changes pre and post crisis. One of them will be measured productivity in the financial services sector. That is an obvious one. The contribution of the oil and gas sector is another one, so we are adjusting for those. Once one adjusts for those, whether it is the service sector or manufacturing productivity, and recall that the manufacturing sectors accounts for two-thirds of the private R&D in the country—and those levels have held up pretty well—and go to those areas, to be slightly like an economist we are still pretty far from the frontier. Overall levels of productivity are in the 70s, relative to the US. There are some issues around market structure and distribution, and other things one can adjust for.

You are not asking the question in this terminology, but even if I subscribed to secular stagnation, in terms of running out of ideas, which I do not, just the catch-up opportunity of this and many economies to best practice is such that productivity growth could run at rates
for some time. That is all subject to the caveats that are always around business investment, whether that is hard investment, process investment or hiring decisions: that businesses need confidence in the medium-term outlook. Confidence is solid but not spectacular.

Q8 Lord Rowe-Beddoe: Governor, last June the Chancellor announced that the Treasury wanted to give the Financial Policy Committee powers to guard against financial stability risks arising from the housing market. I understand that the FPC has now recommended that the Treasury gives them powers to place limits on residential mortgage lending. In what circumstances do you think the FPC should exercise these powers?

Dr Mark Carney: We have asked for two powers: limits on loan-to-value and limits on debt-to-income. As you rightly know, these are for powers of direction. As I referenced in my earlier comments, we have used recommendations—not powers of recommendation, but we have used recommendations—around debt-to-income last year, when we made a recommendation to both the PRA and the FCA that lenders have no more than 15% of their mortgage portfolio in mortgages of loan-to-income higher than 4.5 times. At the time, the proportion of those mortgages was 11% or 12%, so there was a gap. By analysing the market, looking at the number of first-time buyers and looking at the loss history of these types of mortgages, we made a determination that a substantial increase in the proportion of those types of mortgages would run medium-term risk with financial stability. In other words, to put it simply, there would be too many people with too much debt that could not perform against them.

If you look, as we did, at the default history and the non-performance history here in the UK and in other economies, once the debt-service ratio gets to around 35% to 40%, it is non-linear; there is a short uptick in the proportion of households that have trouble servicing those debts. That is consistent with the type of cap we put in place. I bring all that up because that is an example of using one of these powers. We did not have the power. Why should we have the power as opposed to keep doing what we have been doing?

The first thing is the timeliness of implementation. There is a lag between announcement and implementation. In the case of what we did last June, it did not matter as much because we set the insurance level higher. There is a fair gap, and banks could not all rush in and fill that gap, first thing. This lag is a concern, particularly in the housing market. I have seen this in other jurisdictions—we had a bit of this in Canada—where we would make a change but it was announced for a future date, and then people rush out to get the old types of
mortgages, the more favourable types of mortgage, which just perpetuates the problem you are trying to avoid during that gap, so timeliness of implementation is important. The second thing is accountability. If we have the powers, we have to have a policy for using them. We have an accountability mechanism for using them. We have to report to Parliament. I have to provide a public assessment, including cost-benefit of using those tools. It has both of those advantages in terms of effectiveness and transparency. The last thing, if I may say so, is that the FPC looked at a wide range of potential mortgage tools. One could restrict on debt service; one could restrict on maturity of mortgage; one could restrict on a variety of aspects. We tried to be as parsimonious as possible, so in all our analysis we felt that these are the two variables that have the biggest impact, the most predictable impact, and so we delimited the request to those that had those characteristics.

**Lord Rowe-Beddoe:** Could we just ask one more supplementary on that? With regard to the buy-to-let market, which is obviously very sensitive to movement in interest rates and to financial stability in general, what is your comment on that at the moment? We read of a sudden surge in this in the last month or two.

**Dr Mark Carney:** As you know, it is a different market. It is an investor market. The mortgages for buy-to-let are under different characteristics. We are watching this as you would expect; we are watching it as prudential regulators through the PRA in terms of where underwriting standards have moved in buy-to-let. We have not yet seen a sharp deterioration in those standards, but we are mindful of the possibility. We are mindful as well of some possibility, although it might sometimes be overstated, of the implications of the changes to annuities that could feed through. I say that because it is sometimes overstated that there is a relatively limited proportion of annuities or pension pots that unfortunately are large enough to make a down payment on a buy-to-let property. That is the unfortunate reality of some people's pension arrangements. We are watching it. No one should interpret from that that there is any sort of imminent recommendation for action. As you are aware from your question, we distinguish between conventional mortgages and buy-to-let.

**Q9 Lord McFall of Alcluith:** Could I declare my interest as a non-executive director of Atom Bank, which is a challenger bank? Governor, I was interested in the evidence of Chris Meares yesterday at the Public Accounts Committee. This is a structural question, because he appeared before the Treasury Committee in April 2008, which we could probably describe as the halcyon days before the hurricane came along. It was on the offshore
financial centres inquiry that we had, and we asked him about tax avoidance and tax evasion. He said, “If our bankers, say, sitting here in the UK, get any hint that there is tax evasion, then under the legal and regulatory system they have to file a suspicious transaction report. That is the main way. If they have a suspicion that it is happening, we file a suspicion transaction report”. I intervened and asked him if there had been many suspicious transaction reports, to which he replied, actually very confidently, I remember at the time, “Not huge numbers, I am pleased to say, but there are a few and they all get dealt with … For the large global institutions, like ourselves, it has to be self-policing. Our reputation is the first thing. In running our business, I can assure you, the Chairman and the Chief Executive would not want us to have anything that would affect our reputation”.

If we fast-forward to yesterday, he stated that he was “not in day-to-day charge of the Swiss arm. None of this activity was picked up and flagged to me sitting in London. Indeed, the first indication I had”, he said, “was when I received a letter from The Guardian in January 2015”. I am not here to ask whether he was telling the truth or not, or indeed question his intelligence or competence, but I am here to ask you: is it not time, given the multiplicity of problems that we have seen—and Lord Lawson and I on the Parliamentary Commission on Banking Standards have graphic evidence of HSBC’s Mexican subsidiary and Standard Chartered in its illicit dealings with Iran—for us to look very seriously at the issue of too big to manage, because it is obvious that people do not know what is going on elsewhere, and all it does is produce a weeping sore for the financial services system, where the issues and the conflicts seem never-ending?

**Dr Mark Carney:** If I may, Lord McFall, I am going to answer that in general terms. There are a variety of issues embedded in large global banks, some of which we are making progress on and others on which progress needs to be accelerated. In terms of the ability to manage a large global bank, you need the right culture. You need effective compliance. You need a business model that works under the highest standards. Put it this way, UK standards globally apply. The expectation that you can apply local standards so that the standards in Switzerland do not meet UK tests, or an emerging market would not meet UK tests—that world is going. It has gone from our perspective, but it is going from the perspective of managers.

The fourth thing you need is a proper set of managerial responsibilities, a clear line, a clear understanding of the rules and the codes, and recognising, whether it is through the senior managers regime, which the PCBS has helped us put in place and we are moving to have in
place, or the associated certification regime, that managers cannot use the defence of “I didn’t know. It wasn’t in my line of sight”. They have to show that they have taken the proper steps in order to ensure that there is the appropriate compliance, there are the appropriate rules and culture, there is the training and the understanding of all these things, and that that responsibility—I am telling you what you know, as you helped to lead this—leads all the way to the highest levels of the organisation. The CEO has to have taken responsibility, he or she, to put the chair of the audit committee et cetera in place. We are in the train of putting that in place. Now, the best institutions are not waiting for the “i”s to be dotted and the “t”s to be crossed on the results of our final consultation paper and our and the FCA’s application of this. They are getting on with it and they are adjusting.

The process of the global application of UK standards to test the business model to see whether it meets that test—in other words, whether it is still profitable to operate to those standards in country X or in business activity Y—has to be shown. We as prudential regulators—we are not the conduct regulator, as you know—want to be satisfied that that is the case for these complex global institutions.

The other point I would make, just before handing back to you, is that the process of resolution, the process of ending too big to fail from a structural perspective—I know you are asking about too big to manage—is necessarily simplifying these institutions. In order for us to resolve entities, in order for us to properly have ring-fencing in place, you need to simplify the global structures, you need to have clearer lines and you need to have much more direct and empowered governance of foreign subsidiaries, because it is a world in which some parts of the entity may live and other may die. You have to have governance that does not have a conflict of interest but has clear responsibility. I do not want to overplay it, but we are making material progress on ending too big to fail, both through resolution planning and through capital structures.

Lord McFall of Alcluith: Can I bring you up on that, because you said very clearly in your statement at the beginning that it is a watershed in ending the scourge of too big to fail? I know the work you did as chairman of the Financial Stability Board at Brisbane and elsewhere, but you were criticised for that in some way. It gave the impression that that problem was done and dusted, and it has gone. Is it not the case that only international treaties and legislative reforms will ensure that national regulators work together to resolve a failed big bank and protect taxpayers? Without these national regulators working together
and an almost global resolution regime, the issue of too big to fail is still on our agenda, sadly.

**Dr Mark Carney:** I have been very careful in what I have said about ending too big to fail. It has been a watershed, but it is not the definitive mission-accomplished moment. It is restricted to individual institutions. It is not the system as a whole. We have to finish these agreements and we have to finish the resolution planning. The reason why the TLAC agreement is so important, though, is that it puts another layer of capital in place, in effect doubling the capital structure of these institutions, and in a way that connects the home and all the material hosts. It puts money exactly behind the cross-border co-operation that is necessary.

I am trying to be a realist about this. I would love there to be a global treaty to resolve banks, but there will not be a global treaty to resolve banks, so the solution is to have capital structures in place that reinforce the relevant resolution regimes in Europe, which applies to us, the United States—you have solved three-quarters of the problem right there—Japan and a few other jurisdictions. Then—and we have a bit more to do on this—we have to change the contracts in the derivative markets and in a way that allows them to be resolved alongside the other aspects of the capital structure, because we could do everything that I have just described but the derivative market could hold it up. We also had an agreement, and I would give credit to the private sector here, that was largely struck by the private sector, which allows for so-called stays of derivative contracts, which are necessary for them to participate in a resolution.

**Lord McFall of Alcluith:** If I could articulate what you have said there, it is work in progress. What has been done today is commended, but there is a long way to go.

**Dr Mark Carney:** I would say that we are certainly more than halfway there; it will take time for the agreement to change the capital structure of these institutions. Debt has to be rolled over; new capital has to be issued. Once the capital structure is in place, regulators and authorities are going to have in the order of 20% of the risk-weighted assets of an institution to use in resolution before the first call on the taxpayer. What is essential, and part of the reason why we talk about this a lot, is that the taxpayer or the citizens know that, so the easy solution is not taken on the weekend, which is not to use this flexibility that has been created.

**Lord McFall of Alcluith:** The last point is that in a speech last October, you mentioned that UK bank assets could exceed nine times GDP. A number of people had a deep intake
of breath as a result of that, but I note your comments where you said, “If organised properly, a vibrant financial sector brings substantial benefits”. How does nine times GDP assets and a properly organised financial sector work?

**Dr Mark Carney:** What we were just talking about is central to that: that we have an ability to resolve individual institutions. That is absolutely paramount. My point about times GDP—I am doing it from memory, because it was 18 months or so ago, in the fall of 2013—was that if the City retains its share of cross-border banking business or capital markets business, given the relative trajectories of the UK economy in growth, the rest of the world economy and the rising capital flows, for us to maintain our share we end up with a sector that is that order of magnitude. We have to sit here today and ask, “Can we live with that?”—number one—and “How do we live with it?”. Our job is to give options for how to live with that. Ending too big to fail is part of it. Changing the structure of the way fixed income markets work, the way they settle and the use of central clearing instead of bilateral relationships—again so that the derivative side does not pull it down—is another element, and on and on and on. There are big structural things that have to be put in place in order that this Committee and my successor’s successor can sleep at night, with a sector of that order of magnitude, which would be consistent with the UK’s historic role in the global financial system and could bring many benefits.

**Q10 Lord May of Oxford:** As you probably know, my involvement in this came through a committee that was put together in 2002 by the US National Academy of Sciences and the Federal Reserve Bank of New York. I would love to hear your comments on the following question. I have a rough sense of Canada being in good shape, but what similarities and differences do you see between the UK and the US in relation: first, to what happened; secondly, to what actions were taken; and, thirdly and perhaps most interestingly, to their current status? Just a sketch. I am not expecting a detailed report.

**Dr Mark Carney:** That is a yes/no question. There are similarities in what happened. At the core of the system, both the UK and the US had over-levered institutions. Both in the UK, and very importantly in the US investment banking sector—this was not true in the conventional commercial banking sector—regulators took their eye off the ball and focused too much on risk-adjusted measures of capitalisation, where everyone looked fine, and ignored simple leverage ratios, which is one of the basic reasons why virtually everyone here, I suspect, thinks that it is sensible to have a leverage ratio here. You had a steady and alarming increase in leverage at the core of the system.
The second common feature associated with that leverage was a big increase in wholesale finance and, as the pre-crisis period extended, a reliance on short-term market-based finance to fund increased leverage, so extreme maturity transformation and excess leverage at the core of the system. Both countries, in terms of fundamentals, had increasingly over-levered household sectors and challenges in the housing market—different challenges. The US had the challenge of massive oversupply in the end—construction ultimately drove that—whereas in the UK it was the more familiar problem of rising housing prices and people borrowing too much.

My personal view, watching both from slightly afar, was that the US crisis response was much more forceful and comprehensive, particularly with respect to capital. The Americans realised very early on that it was better to appear to over-capitalise institutions. They put in an effective public backstop of capital, after a few missteps with Secretary Geithner, early on, which made a difference. What they did not do—and this is all with the wisdom of hindsight, although a few people advocated it at the time—is have a comprehensive, aggressive enough approach to bad debt in the housing market, which could have alleviated somewhat the scale of the recession. I guess the other thing is that the Fed was quite comprehensive in its liquidity provision to markets. While the Bank of England was aggressive, facilities were developed over time through a bit of understandable trial and error, but again one can look at this with 20:20 hindsight.

There were two big differences in the recovery. The first is that the influence of Europe is almost infinitely more important to the UK than the US. The pace of the initial recovery and some of the setbacks cannot be exclusively attributed to Europe, but can be largely attributed to the shortfalls in Europe. The Bank did an accounting, from memory, of our 2009 or 2010 forecast and the subsequent shortfalls, and the biggest reason for the shortfall is the shortfall in European performance—at least to our analysis.

The second aspect is the distinction—and I will speak in the highest terms—that the US has the benefit of being the world’s reserve currency. That has implications for the path of fiscal policy, the stance of fiscal policy and the immediacy of any need for a fiscal policy. That is a privileged position that is not enjoyed by any other advanced economy.

Q11 Lord Monks: Governor, in a recent speech you were speaking about remuneration in this sector. You talked about remuneration standards that may need to be developed to put “non-bonus or fixed pay at risk”. We have noted that William Dudley, the President of the Federal Reserve Bank of New York, has recently been talking about penalties for
wrongdoing at financial firms that could be paid out in deferred compensation for senior
management. I think you may have been a bit encouraging in your initial response to that
remark. I wonder if you would like to comment on where we are on bankers'
remuneration. We have seen some quite substantial bonuses paid out in the last week or
two for banks that have not exactly been covering themselves in glory, to put it kindly—
much kinder than they deserve. I wonder what your views are on those points.

Dr Mark Carney: It is an important question that goes back to issues of culture, compliance
and consistency. We have spent a lot of time on this, as you would expect, and we have
done so in a European context, recognising the import of the so-called CRD IV rules around
bonuses, which limit the ratio of bonuses to fixed remuneration. I will park that and then
come back to it.

As a general principle as prudential regulators, we like bonuses. In other words—and I will
put it in our terms—we like a substantial portion of compensation to be held back from the
individual, because that is what a bonus is, in effect, in the way we design it, which is that that
compensation is deferred, with deferral up to seven years for senior managers, under our
new rules, and five years for average employees. These bonuses are deferred and there is an
ability, as you know, to claw them back if subsequent events reveal that the individual took
greater risks than had previously been appreciated or if there is evidence of misconduct.
These bonuses are clawed back and there are consequences. We also look to restrict the
ability of an individual to port their bonus, if you will, or to avoid these rules by moving from
one institution to another in order to evade these types of incentive effects.

The challenge we face with rules that restrict the ratio of bonuses to base salary is that we
are reducing these otherwise important incentive effects. In other words, we are reducing
our ability to discipline individuals by deferring their compensation, taking it back if certain
things happen. I should say that the very deferral in compensation, particularly
compensation in equity, aligns the incentives of the individuals more closely with those of the
institution. There is a reason why some of the institutions we have talked about today still
have partnership-type models at the core. They have that benefit. Having worked at one
time in a partnership, I recognise the value of those deferrals. I raised the performance bond
issue—this idea that some fixed pay could be paid in a form that could allow it to be clawed
back if subsequent events revealed things—in the context of a restriction that exists, in
other words the CRD IV restrictions. One has to respect that but also think about how in
that world we can best align incentives of the individual to the institution and to the system as a whole.

May I say one last thing that goes away from bonuses but back to the previous discussion? One of the other incentive factors—I know this was covered by the PCBS and I just want to underscore that I very much support it—is the individual’s licence to trade: in other words, the ability of an individual to continue to work in financial services if they have had violations of standards codes or other misconduct in firms. To what extent can that be tracked? To what extent does that have consequences, whether it is just through information or through broader sanction? Through the process of the fair and effective markets review, very much at the request of industry, I would say, we are looking quite closely at that and the extent to which that can be co-ordinated internationally.

Lord Monks: Thank you for that. In the current London Review of Books, John Lanchester has an article about productivity and new technology. I will just give you a quote from that, on which I ask you to reflect. The quote is: “Capital isn’t just winning against labour: there’s no contest. If it were a boxing match, the referee would stop the fight”. Would you agree that that is an accurate statement, and if it is accurate, has it produced some undesirable consequences, such as inequality in particular?

Dr Mark Carney: The capital share of income, relative to the labour share, has gone up fairly steadily across the advanced world. I apologise that I have not read the article and do not know the whole context, but part of that goes back to something Lord Lawson raised earlier, which is technological change and development. There is often a lag between the development of new technologies, their application, the consequences which those technologies have for traditional employment and the return to traditional employment, and the response to the educational system and individuals to upskill or to change their skills to fully take advantage of those technologies. We have lived, and you have personally lived, through a sizeable adjustment to the manufacturing sector relative to services.

A process is under way whereby the leverage from certain capital automation and algorithmic technologies are such that a range of formerly white-collar, middle-class skilled jobs are being displaced. That has implications for the labour share, because it moves people with skills who, unless they retrain and upskill, move towards lower-skilled applications relative to their skills. It depresses wages, it increases the returns to capital and it is part of that dynamic.
I would say that economic history has shown that, over time, especially flexible economies adjust to those dynamics, and the broader mass jobs that are associated with what I would call mass creativity, or the application of a range of social network and other technologies, could be such that we start to see a turnaround in that. But these are big cycles, and you are absolutely right that we are in a cycle at the moment where the returns on capital have steadily increased relative to labour.

**Q12 Lord Shipley:** Governor, when you were with us in December 2013, we expressed some concerns about the IFRS accounting regime and whether it was appropriate for banks. After that meeting, you wrote to the Chairman and you said that the Bank is in the process of assessing whether regulatory accounts would be a useful addition to our framework. I am just wondering whether you could update us as to the progress of that review and give any indication as to the likely outcome.

**Dr Mark Carney:** A fair question. There are a few things that have happened since that conversation. The first, as you no doubt are aware, is that IFRS 9 has been agreed, so we finally have some progress on expected loss provisioning within the statutory set of accounts, the IFRS set of accounts, which has a 12-month expected loss provision that can be made without a triggering event, which is certainly what we have always wanted and been fighting for. It has taken longer to get than we would like. That is the first thing.

The second thing is that the series of additional accounting disclosures for banks, under the Enhanced Disclosure Task Force recommendations have virtually all been implemented. We have 95%-plus compliance on that, and I can provide the detail if that is of interest. The PRA is reviewing this question of whether, in light of those developments and the genesis of the question, the PCBS findings, there is merit in an additional statutory set of accounts. We plan to report in the summer of this year on those findings. I do not have a steer for you today, if you do not mind, on where we will come out, but we are going to report publicly and back to this Committee on that.

**Q13 Lord Smith of Clifton:** Governor, following the introduction of the PRA’s code of practice, are you now happy with the frequency of meetings between the Bank’s external auditor and supervisor?

**Dr Mark Carney:** It is a very important issue and this interaction is now vastly improved. We have thrice-yearly meetings between the supervisors and the external auditors. This is a productive interaction and our experience is that these engagements are increasingly
effective as they go on so, yes, I would say at this stage that we are pleased with the progress that has been made.

Q14 Baroness Blackstone: Can you give the Committee some more detail about the Serious Fraud Office’s investigation into liquidity auctions at the time of the financial crisis?

Dr Mark Carney: Yes. Thank you for the question. Let me give you all the detail I can give you. I am going to—forgive me—underscore “can”, because I would like to give you as much detail as possible as soon as possible, as is our policy around these things.

We became aware of an allegation. It was a self-described ill-formed allegation in the spring of last year. As soon as this was brought to the attention of me and my fellow governors, we informed the Chair of Court and we instructed external counsel to launch an independent investigation. In that case, the counsel, Lord Grabiner, is in the public domain. On conclusion of his investigation, he recommended referral to the SFO. That was on 20 November. We referred it. We informed the Chair of the Treasury Select Committee in confidence at that time. We were under advice then from the top of the SFO, both us and the Chair of the Treasury Select Committee, to keep this investigation in confidence so as not to run any risk of prejudicing the investigation. These are serious issues obviously, for them to be referred, and it is absolutely paramount that they are properly investigated and dealt with. I do not want to do anything that would jeopardise that.

As you are aware, the fact of an SFO investigation is now in the public domain, so we went back to the SFO and asked for their guidance on what we can or should not say. Their guidance and their advice is that we should not provide further detail about the investigation, so that they can proceed with it in an appropriate fashion.

What we are committed to, though, is that when any issue is brought up, we will run it down. As soon as it has any appearance of any substance, we will ensure that that is done independently. As soon as we can provide Parliament and the public information, we will. In some cases, we may be able to provide some information to Chairs of Committees and others in Parliament before we can provide it publicly, but we will. Equally important is that we will draw out the lessons from the experience, whether it is about how markets function or how the Bank of England conducts itself, and implement appropriate changes.

If I may just add to that, in the course of the last two years, we have put fundamental changes in place to the way we document retention policy and record meetings. We have instituted a new escalation policy, so any sense of issues in markets—and we have lots of markets contacts—are escalated up to the institution and, if appropriate, referred over to
the relevant authorities. It is not something that we did in the past. We have basically transformed the way we do market intelligence. We have people to whom we speak and understand what we are looking for. They understand their responsibilities on this. We are training all our people in market intelligence, and very importantly through the work of the Fair and Effective Markets Committee we are looking at how markets themselves function.

When we look back at the consequence, the impact, of all the measures that we are taking, including fair and effective markets, add into that the changes that we have made to how we conduct liquidity auctions through the new sterling market framework, and look at all that in the fullness of time, which is not that far from here, we will see a change in markets, in the way markets are run in the City in particular, from the more informal or those based on codes, relationships, shared understandings that have not always been honoured in the breach and were found wanting in the crisis, to more formal arrangements with much more transparency, less opacity and more clarity about the regulatory parameter, and that have codes that are understood by all those in the City. The Bank of England’s role in those markets is clearly defined, as opposed to being evolving and somewhat ambiguous, as was the case in the past.

**Baroness Blackstone:** Would it be right to assume that the SFO will be investigating the activities of both Bank officials and external traders?

**Dr Mark Carney:** I would leave it to the SFO to answer that. The clarity that has been provided is around auctions and there are a variety of participants in auctions.

**Q15 The Chairman:** Governor, could you tell us whether you are doing any contingency planning into the possibility that in the referendum, which may take place in 2017, was a vote to leave the EU? What consequences do you believe that would have for our monetary policy? Do you believe that in those circumstances the UK’s specific role as a major global financial centre would be imperilled?

**Dr Mark Carney:** The first thing with respect to contingency planning is that we have a general policy around contingency planning, to the extent we are doing it; we might confirm that we are doing it in general, but we find it unhelpful for the actual contingencies to disclose them. We do disclose them ex-post. I can understand that members of the Committee are busy and they would not necessarily have seen this, but after the Scottish referendum, the FPC published—and it is only two pages—a comprehensive set of what the contingency plans were in the event of a yes vote. If people have time, I can circulate it. I would commend reading that, because it gives a sense of how comprehensive the
contingency planning was from the Bank of England’s perspective. It is quite rightly in the public domain now, so we would always endeavour to do that when appropriate, not in advance.

With respect to questions around a possible referendum, I am very conscious that it is March; Parliament is rising at the end of this month. There is an election and then there are decisions post election, so in many respects we are in a double hypothetical even of the event of having a referendum and then a triple once you get to the vote. With that and our general policy on contingency planning, I would beg leave to end my answer there, if I may.

The Chairman: An event that has happened and does not require us to speculate is that the major UK-based global banks are now shrinking their investment banking activities quite considerably. Do you think that imperils the UK’s position, London’s position, as a global financial centre?

Dr Mark Carney: No, I do not. I would leave it to those institutions to describe exactly why they are doing what they are doing. The reason I do not is that I think London’s position is based on several advantages. Let me preface my answer by saying that it is not the job of the Bank of England to be the champion of the City of London, as you well know, but our contribution to this is to have a system of institutions and markets that are resilient, which means institutions that are well capitalised, liquid, well supervised—not overly supervised but well supervised—capital and liquid; markets that are resilient, that can take shocks, that can bend but not break, which is not what we had prior to the crisis. That is why there was a series of changes to those markets.

We—the collective “we”—then need standards of conduct that are first rate and responsible. The FCA and other authorities, ultimately the institutions themselves, need to have those in place. Again fair and effective markets, and a number of reforms of the PCBS that are now being put in place, are going to help ensure that is the case. I do, through the FSB, look at this from a somewhat global perspective as well to put us at the forefront.

The advantages of London are location, people, technology and the innovation that comes with that. How those are combined and in which institutions will change over time, but if we have the core building blocks right the City can continue to play its historic role, with the consequence that the relative size of financial assets, relative to the size of this economy, could continue to increase, but increase in a more sustainable way.

Q16 Lord Lawson of Blaby: May I ask one quick question on a different topic? Last week the deputy head of the PRA, which is part of the Bank of England, gave a speech to an
insurance conference in which he warned of the huge risk from their fossil fuel investments. I am puzzled for two reasons. The first is that the International Energy Agency, which is the most highly regarded forecaster in this sector, forecast that over the next 25 years fossil fuel demand so far from collapsing is likely to increase. That is its central forecast, so the first question is: what does the Bank of England know that the International Energy Agency does not know about the energy sector?

The other is although the economy is now doing very much better, there are a lot of remaining problems in the financial sector, some of which you alluded to in your opening statement, others of which we have discussed this afternoon. Would it not be better if you focused your attention on those, instead of engaging in green claptrap?

Dr Mark Carney: It is absolutely essential that we discharge our responsibilities to protect policyholders of the insurance industry. In the property and casualty business, in the reinsurance business, one of the top risks is climate change. That is the assessed risk of those institutions with money on the line. Understanding those risks, making sure that they are properly reserved, making sure that the potential tail elements are properly understood, because insurance and insurance supervision are very much about the tails, is absolutely essential to discharging our responsibilities to oversee and supervise the third largest insurance market in the world, which is one of the strengths of the City of London. So the question of the potential impact of climate change on the safety and soundness of the insurance industry, and therefore its ability to honour its policy obligations, is fundamental to the supervision of it. We are undertaking a review of that and it will be published and can be judged accordingly. Given the strength of the UK insurance industry as a whole, it could well be the case, following that review, that it is adequately provisioned and anticipated and contingencies are in place, but we have a responsibility to run that down.

The last point I will make is that so-called stranded carbon, where you led, is less of a direct insurance point. It could be through investments, but the climate issue is more about the liability side, in my view. The issues there are around proper disclosure, more full reporting of the exposures or the reliance of companies on certain types of assets and the extent to which industries are valued on multiples of those types of assets. There could be an adjustment, but the actual adjustment—I will leave with this point in this regard, where it comes to financial stability—is a product in this respect not of climate change per se but of government policy because, to simplify it, it is the changes to the price of carbon that could have an impact on the value of assets that are embedded in some balance sheets. Those are
questions for Parliament, so the issue, I would say from a financial analytic perspective, is one of transparency in that last regard.

**Lord Lawson of Blaby:** I look forward to your study when it is published.

**The Chairman:** Thank you very much indeed. That brings this session to an end. Thank you for your helpful answers.