Select Committee on Economic Affairs

Corrected oral evidence:
The Governor of the Bank of England 2018

Tuesday 30 January 2018
3.35 pm

Watch the meeting

Members present: Lord Forsyth of Drumlean (The Chairman); Baroness Bowles of Berkhamsted; Lord Burns; Lord Kerr of Kinlochard; Lord Lamont of Lerwick; Lord Livermore; Lord Turnbull.

Annual Evidence Session Heard in Public Questions 1 - 17

Witness

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

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Examination of witness

Dr Mark Carney.

Q1 The Chairman: Governor, welcome back to the Economic Affairs Committee. We very much appreciate you making time for us. There are quite a few things happening here today, but perhaps I may start by asking about the Bank’s projections for the economy in August 2016, particularly for business and housing investment and for imports and exports. Why did they turn out to be so wrong, relative to what has actually happened?

Dr Mark Carney: Thank you, Lord Chairman, and good afternoon. First, there are two points of context, after which I will go on to the disaggregation. The first is the way in which the Bank had been expecting the effects of the referendum to work through the economy. We said months in advance of the vote that we expected that, if the vote were to go in the direction that it did, the exchange rate would fall, perhaps sharply, inflation would rise and GDP would slow, the last in particular because of the squeeze on real incomes.

The second point of context is that, at the time of the forecast in August 2016, there had been a very sharp move without exception in all the survey indicators, which were the only data available at the time. Whether it was the SIPP surveys, the CBI surveys, the BCC, the Lloyds business barometer or our own agents’ discussions, et cetera, they all pointed to a very sharp slowdown of the economy. In fact, if you took them in a straightforward mapping of the historic relationships, they pointed to a recession.

The Bank’s forecast in August 2016 was not for a recession; it was for 0.8% growth in 2017. I will come to the disaggregation, but it is important to recognise that the Bank’s forecast at the time, given the information available at the time, was above the average forecasts of consensus, in a quarter when external forecasts followed through on where the surveys were with straight recession being forecast.

In terms of the outturn, the most recent data came out last week, as you know. On an annual average basis, not a calendar-year basis, there was 1.8% growth versus the 0.8% forecast. What caused the discrepancy—the 1% difference between the two—with the wisdom of hindsight? The first fact is that the world economy is much stronger and the European economy is much stronger. The world economy is stronger by half a percentage point and the European economy is stronger by one and a quarter percentage points. World trade is accordingly much stronger as well. That effect coursed through the UK economy. Our estimate is around 0.4 of that 1%, so 40% of that discrepancy is a consequence of the stronger world economy.

The second factor is improved financial conditions relative to the conditions at the time and our expectations of those financial conditions—I think about 0.2 or so added there. One could add a tiny bit for the
loosening of fiscal policy over the course—the reduced pace of the
tightening of fiscal policy would be the most accurate description. The
balance—around 40% of the discrepancy, or 0.4—is what you have
pointed to, which is investment and, in particular, consumption and
housing. The difference there was that we had expected tighter financial
conditions, which would have affected both, but also higher levels of
uncertainty affecting both consumption and housing.

Two things happened with respect to uncertainty. First, it went down
from elevated levels in August. Secondly, it did not have the impact on
consumption that we had expected consistent with the forecast. In that
regard, we have seen the behaviour of British households, which has
been to consume out of income through this period. As I think we all
know and all celebrate, there is record employment in the economy.
Wages have not been growing spectacularly, but they have picked up,
and households have been consuming out of income, with a small
reduction in savings.

I have a final point, if I may, which I am sure your colleagues will follow
up. Unlike a weather forecaster or an external forecaster, when the Bank
of England forecasts, obviously that has consequences for policy. We
have a forecast for a reason: to think about the right balance of policy.
Our policies were with respect not just to monetary policy but to
macroprudential policy; we loosened bank capital with respect to the
countercyclical buffer and implemented the monetary policy package,
which had an implication certainly of easing financial conditions and
flowing through to the economy. One can argue about the extent to
which those actions improved confidence and helped to support growth.

I re-emphasise two things. First, we aimed off the data and had a
stronger forecast, given where the data available at the time was.
Secondly, in terms of policy response, we aimed off our forecast: in other
words, we made it clear that, if our forecast were to come to pass,
additional stimulus would have been provided. We had a contingent
commitment to round policy but, given the range of uncertainty, we did
not follow through on that. Then, of course, as the economy picked up,
that contingency fell away.

The Chairman: I understand the points that you make, but I was struck
by the fact that business investment, for example, which you suggested
would fall by 2% in 2017, actually went up by 2.25% for the 11 months.
You predicted that housing investment would fall by 4.7%, but it actually
went up by 4%. Your chief economist, I think about this time last year,
said on both the consequences of Brexit and the financial crisis that the
Bank had had a Michael Fish moment, by which he meant that Michael
Fish had said that the hurricane would miss the country, when in fact it
was the biggest storm that the south-east of England had seen in a
generation. There seems to be a tendency to predict storms and we get
sunshine. Should the Bank perhaps be a bit more cautious in its
predictions, particularly given the uncertainty as to the effects of the
decision to leave that you have just described?
**Dr Mark Carney:** First, may I correct the record about what my colleague said? The Michael Fish moment to which he referred was the Bank not calling the financial crisis, so not being sufficiently prudent and cautious. We will stay with what we are discussing, which is the forecast and outturn and lessons learned—

**The Chairman:** I am relying on the *Guardian*, which is not always my main source. It reported that he “admitted his profession is in crisis having failed to foresee the 2008 financial crash and having misjudged the impact of the Brexit vote”.

**Dr Mark Carney:** I think that we can accept that on occasion even the finest national newspapers do not get the exact quote.

**The Chairman:** We can agree on that one.

**Dr Mark Carney:** I have the advantage of being able to speak to the chief economist at the Bank of England on a regular basis and I know what he said and what he intended to say. There is a big lesson about the global financial crisis, but set that aside and focus on these forecasts.

I reiterate the point about getting the broad economics right, which I think we did—we got the broad economic channels right—and taking what, even with the wisdom of hindsight, I very firmly believe was the right course of action to support the economy and to balance the return of inflation sustainably to target, but also to support the economy during a period of some uncertainty and some external force.

The other point I would make is that in a mature discussion of the effects of the referendum and the prospects for this economy during a period of transition, which is what this economy is in, we should recognise how the forces of adjustment are affecting it. Yes, it is good news that business investment is up; it ends up rounded to 2% on the most recent figures.

However, business investment is not up in any way to a degree that reflects the world economy growing at over 4%, with the easiest and most supportive financial conditions in over a decade and with the strongest balance sheets in probably 25 years, along with huge opportunities in an environment of greater certainty. It is not growing to the extent to which it could. We estimate that it is four percentage points below what it otherwise would be. That is not just us sitting there estimating; it is based on discussions with 2,000 businesses up and down the country and the other survey evidence. I am sure that the Committee has these conversations as well. I think we all recognise that, this year in particular, there are some headwinds to this economy that we all want to see cleared in a clear direction.

Again, to put it into context, let us go back to our May 2016 forecast, which was conditioned on a different outcome of the referendum. That forecast, relative to where the economy is today, shows that the economy is about one percentage point below what we thought it would be today, given a different outcome and given the strength of the global
economy. If you go for the IMF forecast—we do not exactly agree with that forecast; I think that it is a little light for the UK economy for 2018—but if we roll it forward for this year, it is two percentage points below that May forecast.

If we are going to play counterfactual, we should look at both counterfactuals. What is most productive is to understand how the process of leaving the European Union is affecting businesses, households and our export markets. The good news on the export side is that our exporters have been able to take pretty full advantage of the opportunities. They had spare capacity and they are more competitive because of the exchange rate, and they are getting on with it. It is understandable that, on average and on the whole, our businesses are waiting to see what their future arrangements with the EU will be and where the bigger opportunities will be outside. That is understandable for a period of time, and we can conduct policy accordingly.

I turn to my last point. Households in effect are looking at their situation today. Consumer confidence figures that came out earlier today show historic averages that are not consistent with a very strong global economy and the lowest levels of unemployment and highest levels of employment since records began, but they are reasonable for people who are in work and just starting to see the prospect of a return to real income increases. That is the set of circumstances that we are dealing with and the forces that we are trying to judge in striking policy.

**Q2 Lord Lamont of Lerwick:** I would not be too severe on the forecasters for getting it wrong; in my experience they often get it wrong. The point that interests me is the relationship between forecasts and policy. I thought that Paul Marshall, the chairman of Marshall Wace, made a good point in an article in the *Financial Times*. He is a remainer. I make that point simply because he went on to say that he felt that the Bank of England has a cognitive bias about Brexit and was temperamentally assuming the worst about it, which was likely to lead to a distortion of policy, and that because you were convinced that Brexit is bad for the economy, in 2019 you would be inclined to have too loose a monetary policy as a consequence of your cognitive bias.

**Dr Mark Carney:** There are a few things in that. First, we do not have a bias about the outcome. We look at the economic forces however the negotiations go and whatever the outcome with respect to the European Union and the rest of the world. We look at how it affects the exchange rate, how it affects the supply side of the economy, and how it affects demand. It will be the balance of those that determines the appropriate stance for monetary policy. The bigger questions of longer-term economic impact, as you will appreciate, Lord Lamont, are outside our policy horizon. That is the first point.

Secondly, the view—I would not call it a bias, and it may turn out to be wrong—of the financial markets of the impact of Brexit on real-income prospects is more consistent with the forecasts of the Bank of England. I will give the Committee some examples. I think we are all familiar with
what the exchange rate has done since the referendum, but there has been less focus on UK-focused equities, which are basically flat; they are up 2% since the referendum. Non UK-focused equities, the other bit of the FTSE, are up 28%. The S&P 500 index is up 35% to 38%. Global equity markets have seen a substantial rally while UK-focused equities have basically traded flat. Real yields in the UK have gone down while those in other economies have gone up. The equity risk premium in the UK relative to the equity risk premium in other advanced economies, particularly the United States, has increased by 300 basis points. The volatility around UK assets is in a different area, in particular around exchange rates, than it is for other advanced economy assets. So there are some real income effects.

Again, financial markets could be wrong. We would expect them to adjust as there is greater clarity about the future relationship, and I am sure that we will come on to the opportunities there, hopefully quite positively. Look, we do not have a bias on this. There will be, in our judgment, relative to the status quo an impact on real incomes in the country for a period of time that is relevant to the monetary policy horizon. Since the vote, real household incomes have gone down by about 3.5%, again relative to what our expectations were in May. Again, that is consistent with the expectations, and we balance the policy accordingly.

I would expect that in 2019 we will see a pick-up in investment in this economy given the strong global economy, all things being equal. My impression—I would be interested in yours—is that UK businesses are looking for certainty, and given the health of their balance sheets and the financial conditions, once they have greater certainty—there is never absolute certainty—they will look to putting that money to work. So we should see a pick-up in investment in 2019. We will see how that comes out. Our precise forecast for growth in 2019 will be released a week on Thursday.

**Lord Lamont of Lerwick:** How far is policy influenced by the forecast? If the forecast has been wrong in many respects, as unfortunately it has been, does that mean that monetary policy has been wrongly set?

**Dr Mark Carney:** No. Again, in my opinion, we have set policy appropriately. We have helped to put the economy in a position where we have more people in work than ever before and we have the prospect of returning inflation sustainably to target. The important thing with policy now, a point that we made in our November and December decisions, is that as the trade-off has been removed—in other words, as slack in the economy has been taken out—we have moved into a more conventional area for monetary policy where the focus is increasingly on returning inflation sustainably to target over an appropriate horizon.

**Baroness Bowles of Berkhamsted:** I have two questions. One is a small follow-up question on what you have said about releasing the macroeconomic buffer. Macroeconomic buffers cannot have been in place for very long, because they were only invented to start in 2014. In light of the experience of releasing them, what percentage were they at? Do
you think that had a significant effect, and have you learned anything from it?

The second question is not particularly to do with Brexit, but I understand that the Bank of England now has 10 times the number of economists that the Treasury had when it used to set monetary policy. Without being rude, what are they doing? Is it because there is more data? Does everybody have more economists now? Are they doing extra things? Is it a natural inflation of economists over that period of time?

Dr Mark Carney: First, on the macroeconomic buffer, or more specifically, as you are familiar, the countercyclical capital buffer—the CCyB, if I can use the abbreviation—we had put in place 0.5% of risk-weighted assets, so we were in a position to release it, which we did following the referendum.

One cannot be absolutely precise about this, but there was some concern, and some of our modelling suggested the possibility of some concern, about banks being constrained. It had a macrofinancial effect, but we also wanted to send the very clear message, to British households in particular, that if you could have got a mortgage before the referendum, you could get one today; if you had a good business idea and you could have had financing before, you could get it today. We wanted to remove any uncertainty. You can gross the capital release, if it were fully leveraged, into the tens of billions of sterling of lending capacity—much more than would have been needed to just to remove one element of uncertainty, which is natural.

The problem with macroprudential policy is that success is an orphan, and if you do the right thing it is taken for granted, so we are debating a counterfactual. But in the summer of 2016 there was tremendous uncertainty, and you had a sense, from surveys and discussions with businesses in particular, that they were feeling, “Are we going back to what we went through in 2008-09?” The ability to release capital and say, “We are confident enough”—which we were; we were not taking a big risk by releasing capital, but we had that confidence to be able to demonstrate it—was just another way of showing that the system was in a different place and that people could get on with things.

On the number of economists, the short answer—we can go into more detail if you would like; if you are interested in a disaggregation of what everyone at the Bank of England does, I would be happy to provide it—is that the Bank is doing much, much more than it used to. The actual number of economists in our core macroeconomic forecasting area—the so-called MA—has not been growing over the past several years. What has been growing is the number of people who work on financial stability and supervision and beyond. That supervision is insurance companies, banks, building societies, credit unions and financial market infrastructure, plus the resolution responsibility that we have been given. That is the area where there has been natural growth, given the additional responsibilities.
Q4 **Lord Turnbull:** Prior to the referendum, the Treasury and the then Chancellor produced some rather spine-chilling assessments of what a negative vote would produce. I seem to remember that the Bank was pretty much in that camp. I suspect that there was a cognitive bias, and that while the opinion polls were saying that it was going to be all right, you had a favourable view, and then when it went the other way, it seemed as though it was validating your prior view—forgetting the fact that more than half the population outside London would have had a spring in their step because they did not fear this thing as much as you did.

Looking ahead, we have had a leak today of three scenarios, produced presumably by the Treasury or DExEU—the Government, anyway. Has the Bank itself done a similar exercise, not on the initial impact but on the longer-term different trading relationships that might emerge, or was it consulted by the Treasury on the work that it has just done?

**Dr Mark Carney:** I appreciate the psychoanalysis that is being done on me personally and on the Bank. I will say a couple of things on that.

First, we said, prior to the referendum, that we thought the exchange rate would fall—perhaps sharply—inflation would go up and growth would slow. After the referendum, the exchange rate fell—sharply—inflation went up and growth slowed. That is what the Bank said.

The second thing that we did, which we did not say in public for obvious reasons, although we did announce that we would have extraordinary auction facilities of liquidity in place, was to spend a great deal of time with foreign central banks and UK-based financial institutions to pre-position almost £400 billion of collateral in order to ensure that instantly, on the day, there was the liquidity needed for markets to function smoothly. Because we did that, we were able to be very clear first thing in the morning that that was what would happen. In that case, of course, we were looking not at the most likely analysis but the tail-risk analysis, which is what we have to do for financial stability.

Your question, with respect to you, is about the Bank’s assessment of longer-term impacts. For the purposes of fulfilling our remits, for monetary policy, as you can appreciate, we look out to three years and sometimes just a little beyond that horizon if that is relevant. That is not a longer-term forecast; that is a transition-period forecast.

In terms of financial stability, we are not looking at the most likely outcome, we are looking at the tail. The Financial Policy Committee has been looking at and assessing particularly what channels would affect the financial system and what could be done to mitigate them if there were to be a disorderly Brexit, which is not a likely scenario at all; it is less likely than at the time we did the assessment in the fall. We reported on that in our financial stability report. We think, for example, that the banking system, most importantly, is well capitalised for a disorderly Brexit. Relatedly, we have surfaced a series of cross-cutting issues, from
derivatives to insurance and data, which the two sides, I believe, are now beginning to address.

We were not consulted—I am not familiar with the material that is being discussed elsewhere in Westminster today. That is the short answer. Obviously, we have discussions with the Treasury; for example, for the financial stability risks, the Treasury representative sits on the FPC as an observer, so it is familiar with that. I have discussions with the Chancellor on a variety of economic issues, but we are not preparing longer-term forecasts.

To be absolutely clear, we do not have a fully articulated forecast of different trading relationships over the medium term—no “This is what the impact would be on the UK economy”. The only things we think about are the tail risk; the immediate effect, as agents in the economy—if I can use that term—are anticipating potential outcomes; and, lastly, the potential productivity impacts of different scenarios and how those could affect the amount of supply in the economy today, but that is not a full forecast.

**Lord Turnbull:** The impression I am getting is that you are looking particularly at the difference between orderly and disorderly exits. All exits could be orderly, but you have not done different models of the end regime.

**Dr Mark Carney:** We have used an average of different end regimes and a long transition to those, so not a three-and-a-half-year transition, not getting to that average between a WTO and an EEA-type relationship—we are not looking at that beginning effectively at the start of 2021. When the negotiations mature to a point where we know where we are headed and when we will get there, we will have to do that sort of analysis and adjust the forecast accordingly. But, again, the only comprehensive, coherent—if I can use that term—and consistent forecast that we will have, consistent with fulfilling our remits, will be a monetary forecast, which means a three-year horizon.

**Lord Kerr of Kinlochard:** When we as a Committee came to see you before Christmas, you briefed us on ongoing work on the architecture of dynamic equivalence over time. How confident are you that it will be possible to secure some kind of satisfactory agreement with the European Union on an equivalence regime?

**Dr Mark Carney:** Obviously, as you know, Lord Kerr, we are not party to the negotiations. We operate in a technocratic support function for the Treasury in particular and for the Government more broadly. I would answer the question in this way. There is a unique opportunity to have a dynamic equivalence arrangement that focuses on equivalence of outcomes as opposed to textual equivalence of every rule. There are very strong incentives to do so. We would have varying views on the incentives for the UK. I could go into them, but it is probably better to focus on the incentives for the European Union.
I think the EU’s competitiveness is well served by having access to the leading global financial centre. It avoids the loss of certain services that would be inevitable if there were fragmentation. It avoids some of the financial stability risks, inefficiencies and greater complexity that would come with fragmentation. It would also ensure that the most complex aspects of finance continue to benefit from, if I may use an overused term, the ecosystem that is here, particularly in the City of London. In that ecosystem I would include the financial market infrastructure and the supervisory and regulatory superstructure that is in place which helps to manage and reduce those risks appropriately. To put a fine point on it, in the end, these activities being housed in the UK means that ultimately UK taxpayers bear the residual risk, which, perhaps in answer to an earlier question, is why we have more economists who are looking at this.

The European Union benefits tremendously, and the incentives are there, so the question is how actually to structure it. In my and colleagues’ judgment, it requires a focus on equivalence of outcomes as opposed to exact equivalence of rules. Obviously the starting point, because of the acquis and process you are undergoing, will be the exact same rules and regulations, but we can recognise that there will be divergence over time. The issue then is how to manage that divergence. What mechanisms should be put in place to address the dynamism of it over time?

That requires mechanisms of regulatory co-operation, a council that would review changes to regulation and make judgments about proposed changes in either jurisdiction, deciding whether they are appropriate or whether they materially change the equivalence of the outcomes in terms of financial stability, market integrity, consumer protection, competitiveness, and fair and equal competition. It requires what we already have today.

What we are keen to continue with, as we indicated in our announcement prior to the holidays, are mechanisms of supervisory co-operation and information sharing. Obviously it would also require, as any trade agreement requires, some form of dispute settlement mechanism. To be absolutely clear, we need a dispute settlement mechanism that is not wholly housed in either jurisdiction but is staffed by third-party experts and appeals appropriately to the relevant law. I will leave it there.

**Lord Kerr of Kinlochard:** The *Financial Times* ran a story the other day on a bit of this in relation to the so-called transition period. The reaction in Brussels was one of incredulity: did we in London really think that we could vet the laws of the EU that we had left and veto those that we do not like? The idea was pretty generally dismissed in Brussels yesterday.

I wonder about this. Your basic point is that it is a lose-lose; if we do not pull this off, they lose and we lose. I agree with that. They tend to say that the easiest way to solve the problem would be for the UK to stay in the single market. We say that we are definitely not going to do that. We do not make it very clear what we do want, but we are clear that it is not the single market and the customs union. We send David Davis to Berlin
to tell the Germans not to put politics in front of economics. If you are German, you think that that is exactly what we are doing. We are cutting off our nose to spite our face, and then we say, “What we really want is for you to let us go on having our say or our veto on EU rules”.

I do not see how this can work. The argument that it is easy because we are starting from a position of total alignment seems to me to be the opposite of the truth. If we were trying to align more closely, that would be a process which the EU is used to with candidate countries for accession. To manage a separation is a much more difficult process intellectually. I must say that I do not see any willingness on the other side to do it. It seems to me that the politics is going to get in the way of the economics.

**Dr Mark Carney:** First, it is the Government’s policy, consistent with the Prime Minister’s Florence speech. Secondly, it is my view that it is very strongly in the interests of the European Union that certain wholesale activities are very efficiently, effectively, sustainably and resiliently supplied largely out of London. Those activities will not migrate seamlessly to Europe. Some of them will go to other jurisdictions, but many of them will cease to exist vis-à-vis the European market. What is required, if I may suggest it, and I am sure the Government will do this at the appropriate time, is a more comprehensive articulation of Florence and this approach, which would then prompt a reaction to something other than an objective.

Perhaps I may make a last point on this. Having participated during the development of most of the relevant rules, both at an international level and then transcribed to the European level, that affect wholesale finance in particular—we are really talking about wholesale finance, which is an important subset of this activity—and given the nature of what is an international financial centre, not a local financial centre, albeit a large one if it is in Europe but still a local centre that has everything ring-fenced in that economy, something like this is required in order to preserve those benefits.

To repeat, ultimately the UK will be the leader in putting this on the table. It is the UK’s responsibility to put something on the table that transcribes it or makes it real at the appropriate time in the negotiations. That time has not yet arrived given that the discussions are still just moving on transition.

**Lord Kerr of Kinlochard:** I understand what you say about a subset. I understand too that you do not envisage that equivalence needs to be established and maintained in, say, retail banking, but that it should be in investment banking. But across the channel that is the British cherry picking; it is us going for the areas where we have an advantage. Yesterday, 27 politicians agreed in Brussels that there was not going to be any cherry picking.

**Dr Mark Carney:** “For the purposes of the transition period” was the direction. As you also know, we are a few steps away from the actual
negotiation, but I listen carefully when I hear the leaders of major European economies saying that there will be a special element to the UK arrangement. It is very important for financial stability over time. It will be a better system for the UK, Europe and the rest of the world, but also for competitiveness—again, in Europe as well as the UK—if something like this can be developed. The challenge is to put something on the table at the right point and have a discussion about the concrete as opposed to the more abstract.

**Lord Kerr of Kinlochard:** You said it would be helpful if there was a clearer articulation of where the Government want to go. Did you expect that there would be a position paper some time in the autumn? A lot of the City seems to have expected it, but it now seems it is not coming.

**Dr Mark Carney:** I did not expect a position paper. I expected the Government to be doing what they are doing, which is focusing on the actual discussions that they will be having with Europe. Of course it is important to talk to the City and other stakeholders in other industries, which they do.

Q6 **Lord Lamont of Lerwick:** Looking beyond the transition, are there some areas where you think that, in the long term, divergence would be in the UK’s interests? For example, in banking regulation—capital requirements—there could be some scope for divergence.

**Dr Mark Carney:** I am a little reluctant to speculate on what would or would not be scoped in in a negotiation that has not properly begun. I would not want to inadvertently send a signal on that. What I would say—this is very clearly on the public record, and I stand by it—is that when Lord Hill began a process as an EU Commissioner to reform the financial elements of the acquis after a huge blizzard of regulation had been put in place, much of which we agree with, the issues which the Bank of England identified particularly with respect to banking regulation concerned proportionality. If you are a domestic bank, akin to what happens in the United States, there is a different weight; only a subset of Basel-type rules would apply to those banks. That is something that we stand by. There are certain elements—I think we may have spoken about this—with respect to Solvency II, where not surprisingly we disagree with some of the specifications and we do not think they add to resilience.

There is the thorny issue of the bonus cap. To be absolutely clear, there is a philosophical issue that I can understand some of the country having, which is not to dictate specific levels of pay, but there is a fundamental financial stability issue, which is that we have a system now, thankfully, where if somebody does something wrong, whether it is taking too much risk relative to what they represented or malfeasance of some sort, bonuses can lie fallow or we can claw back previously paid bonuses. We cannot claw back compensation paid in that year. The bonus cap has not reduced overall compensation, it has just increased fixed cash compensation, which has to some degree undercut or reduced the incentives that have been put in place. If we could change that, we
would, but if it were part of a negotiation, obviously we would be bound by the negotiation.

Lastly, as a general point, a series of regulation has been put in place, the vast majority of which, I agree, has been effective, but there is no question that there is some overlap and some inconsistency and there is a need to look at that body of regulation—we have started to do this at the international level with the FSB—and figure out what is redundant and how we could achieve the same level of resilience in a more efficient manner. We have started with the leverage ratio. We are moving to issues of infrastructure, and we will move through it that way. Irrespective of what the ultimate deal with Europe is with respect to financial services, I expect that there will be a series of adjustments to financial regulation.

**Lord Lamont of Lerwick:** I have a question about equivalence but equivalence specifically relating to clearing houses, both in the transition and in the permanent arrangements. If there is no agreement on equivalence for cross-border transactions originating from clearing houses, is that not going to have a most devastating effect on the capital requirements of European banks?

**Dr Mark Carney:** If a location policy were put in place, you would be absolutely right. It would be in the order of €10 billion immediately. But there is a much bigger effect, and I will use the location policy, citing public figures—

**Lord Lamont of Lerwick:** I think Boston Consulting put a figure of €40 billion on it.

**Dr Mark Carney:** There are different figures, but the most relevant is the cost to the real economy and pension funds, which for each basis point of differential that opens up because of a location policy and the ring-fencing of central clearing is in the order of €20 billion per basis point. That is a cost that would be borne by the European economy, not the financial institutions, ultimately. So it is big numbers, yes.

**The Chairman:** I ought to have declared an interest as chairman of Secure Trust Bank.

**Baroness Bowles of Berkhamsted:** I declare an interest as a director of the London Stock Exchange, as we have got on to financial services. The side that we can control is what we allow in terms of passporting rights into the UK. Obviously that can be part of the negotiation, but you could be in control of how much you could authorise those firms if there is not some kind of generic arrangement. How quickly could that be done, and is it dependent on there being a transition period? Who will suffer if it is not?

**Dr Mark Carney:** Under statute, if we receive an application for authorisation, we are obliged to authorise or not within a 12-month period. On average, since the PRA came over to the Bank of England and that statute became relevant, the PRA has authorised about 13
institutions per year. To give a sense of the order of magnitude, we expect something in the order of 150 applications on the banking and insurance side from EEA entities. On top of that, there is a question about the 30 to 40 entities that have access through the passport. The first lot, the 150, are entities that are currently operating in the UK, effectively through branches. They would have to be re-authorised, and the question would be: could they be re-authorised as a branch, or would they have to convert to a subsidiary?

As you are no doubt aware, we laid out our approach on 20 December and we have started a consultation on our new approach to address that. The headlines of that—I will turn to our capacity in a second—are, first, that we have a presumption that ultimately we will come to some arrangement with the European authorities that provides a level of supervisory co-operation and information-sharing that is consistent with entities that currently operate as branches here continuing to do so. That would be in the best interests of how the system operates and obviously those institutions in particular.

In the event that we could not come to an arrangement, we would have to judge whether some of those branches should convert to subsidiaries. It matters whether or not they do retail on a sufficient scale; about four of the banks do at present and about three of the insurance companies do, to the best of our judgment. Secondly, it matters how big and how complex they are. About 25 banks on the first screen would have more than £15 billion of assets either here or remotely, and so would fall into that.

Irrespective of whether the branches are subsidiaries, they have to go through the process, so I will finish on our capacity. The short answer is that we think that we do have the capacity. We now have 52 people working full time, so we have significantly ramped that up. Then we have the full-time equivalent of another 30 people, so we have 80 where we would have had 25 or 30 previously.

But we also have the benefit of a temporary permission regime which the Government have signalled that they would put in place. The first best situation is that firms that are ready to seek authorisation—a number have been getting themselves ready—will come in and we will be able to space this out. Obviously, we would benefit from a transition period, but we have the resources and the prospect of a temporary permission regime, which would give us some flexibility.

The last point is that if we get to the spring, and in the very unlikely event that the transition period is not finalised, we would then have to accelerate with the firms.

**Baroness Bowles of Berkhamsted:** Can I ask about the transition period? Obviously it is useful in the short term when people are trying to adjust, but from the long-term, down-the-track perspective, do you think it is positive or negative in its effect? Does it perpetuate “wait and see” and then there is some chaos at the end, or are you basically, through
co-operation during the period, training up the EU regulators and giving them time to build their infrastructure so that they can pull away more?

**Dr Mark Carney**: Whether they pull away, to use your phrase, or relocate will be determined by the arrangement that is negotiated. If we do not negotiate secure access for certain activities, we can expect that, over time, either they will migrate to Europe or the activity will just cease. Temporary equivalence or temporary access through the transition is just that, so the focus should be on the longer term.

The transition period will be quite useful to finish authorisations and sort out issues with insurance. It will help with the process on derivatives, although given the scale and complexity in that area, ultimately a legislative solution will probably be required.

**Q8 Lord Turnbull**: A finding that has emerged from the Brexit discussion is the question of cross-border insurance contracts. You highlighted in your financial stability report that if EEA insurers lose their authorisations, this “may restrict their ability to collect premiums and pay out on policies”. Sam Woods has said that it may be illegal for companies to pay claims after Brexit; pensioners in Spain will not get their pensions and so on. The Chancellor had an answer on 20 December that the Government would legislate if necessary to enable EEA firms and funds operating in the UK to obtain a “temporary permission”.

I have two questions. The first is whether that is a watertight method of solving the problem until a proper solution can be found, and whether we need the EU authorities to offer the same guarantees, otherwise my AXA travel insurance will not be paid.

**Dr Mark Carney**: Yes, these are very important issues. You are familiar with the fact that there is £20 billion-worth of sterling insurance coverage for 6 million UK policies, so the Chancellor’s announcement is very important in that regard. He has offered the prospect of temporary permissions in order to ensure that there is a smooth transition.

**Lord Turnbull**: Is that going outwards or inwards?

**Dr Mark Carney**: I will come to the outwards, but I think we should cover the inwards as well, because we know that there are 6 million policies held here. Ideally, as part of the separation agreement—let us call it that—there would be some grandfathering or permissions for the existing contracts, the so-called back books of the insurance companies, that would go both ways so they would be part of the agreement.

On your example on the continent for those who are being insured by something like 80 entities in the UK—the headline numbers are £40 billion of coverage on 30 million policies—there are various ways to ensure that those are honoured. As I have just said, the first best would be part of the separation agreement, while the second best would be the European authorities doing something akin to what the Chancellor has announced.
I would point out that our best estimate for the life and pension component of those policies is about 5% of them, which gets to potentially 1.5 million to 1.7 million individuals if they are all discrete. Let us say for the sake of argument that those are all UK pensioners. It means that there are 28.3 million other policies that are held by EEA entities and citizens, so the incentive structure is very much there and, I think, recognised by the European authorities to sort it out.

They can address it by doing something akin to the Chancellor, but the last way to address it is through a so-called Part VII process. The UK entity would go through the UK courts and reassign the policy to a European subsidiary or sister company of the entity. Several months ago we took the initiative by writing to the High Court to alert it to the potential volume of this activity and received quite a constructive reply. Again, in a world where all those other solutions do not work on the European side and there is a transition agreement, there is a greater prospect of that being done. It certainly should be part of the separation agreement and in our conversations with the European authorities, they recognise the issue and will be looking for a solution.

**Lord Turnbull:** Are you talking about only existing contracts, the back book, or a regime that will continue to allow people to write insurance business?

**Dr Mark Carney:** That is to be negotiated. It is a question of priorities and of what is scoped into the agreement.

**Lord Burns:** You said earlier that the Bank had anticipated a fall in the exchange rate and some increase in inflation. How far do you think we are now through this process? Does the recent stabilisation to some degree of the inflation rate suggest that we are now some distance through it, or do we have further to go?

**Dr Mark Carney:** We have further to go. The experience, particularly over the course of the past decade, with large and persistent exchange rate moves is that there has been quite material pass-through to consumer prices and that that pass-through has come through over time.

Using a broad brush to describe how it flows through to CPI and people’s shopping baskets, we had about 40% of the effect in the first year, then 30%, 20% and 10%, so that it is tiny by year four. Of course, the farther out you go, the more other things are affected in terms of inflation and offsetting. We are about 18 months into this. Again, the rule of thumb is that in a big exchange rate move, about 60% goes to a first stage pass-through—in other words, import prices—and the weight in the consumption basket is just under 30%; or 30%, which I will use for the sake of argument. Given a 15% fall in the trade-weighted exchange rate, we should think about a 2.75% rise in the price level over time. Around 1.1% to 1.3% of the pass-through has shown up.

The pass-through has been behaving to the CPI as we had expected. The material amount has come, but there is more to come, gradually tapering
off. It means that the reason inflation is above target today, and we expect it to remain above target in the near future entirely because of the exchange rate movement.

Lord Burns: Are you surprised that earnings growth has not responded to this? If one combines the way the actual inflation rate has increased and the level of unemployment has come down, it is quite striking that we seem to be faced with average earnings growth remaining relatively steady. It is an unusual set of circumstances. Do you think it is likely to remain like that, or are we likely to see some upward movement in earnings rates?

Dr Mark Carney: That is a very important question. I will start with why the exchange rate moved and why one would not expect it to have a one-for-one effect on nominal wages. There is a judgment—it could prove wrong and we should all be working to make sure that it is proven wrong—across financial markets, including the exchange rate, that the referendum has led to a hit to real incomes. That hit to real incomes can be taken a couple of ways: through slightly higher inflation or higher unemployment. So the translation of that to the real earnings of UK households is exactly what we have been seeing—this 3.5% relative fall in real earnings.

Your question included the state of the labour market and the prospects for those earnings. As you can appreciate, one thing that has also been weighing on nominal earnings has been the rate of productivity growth. We think that the labour market has continued to tighten. We see that with a higher participation rate in the most recent figures—the high levels of employment. We see it in a range of surveys, and we are seeing it in higher job-to-job flows. We see it in the gradual firming of wages, particularly private sector wages, and particularly of people who are shifting work. Obviously, we are going to update our forecast, but from what I see today, the firming of the labour market and the pick-up in wages over the next few years appear to be on track. There is a prospect of the return of real-income growth later this year.

Lord Burns: How close are we to the exhaustion of spare capacity?

Dr Mark Carney: May I dodge that one? One of the things that we do as part of this forecast round, once a year, is to bring together all our judgments on exactly that question. We have actually had those discussions, so I would rather let it come out on Thursday week, if I may.

The Chairman: Just following up that point about the relationship between wages and full employment, to what extent do you think zero-hours contracts, using casual labour, and technology have been a factor in the point that Lord Burns is making?

Dr Mark Carney: There is some evidence for that. Without question, the rise of self-employed and the still elevated levels of individuals who are involuntary part-time workers—they would rather work more hours—is something that Danny Blanchflower and David Bell have done a
tremendous amount of work on. We have taken some of that into our assessment of so-called slack in the labour market.

With respect to the contestable aspects of technology and whether more broadly the changing nature of work is weighing on wages, it is possible but it is very hard to quantify. As we increasingly get to a point that would be consistent with full employment, we would expect to see what we are seeing, which is a gradual firming of wages. There is some element of a headwind there, but it may not be decisive over the monetary policy horizon. We will find out a lot more over the course of this year.

Q10 Lord Livermore: Sticking with inflation, over the past three years, you have had to write nine letters to the Chancellor explaining why the inflation target has been breached. Do you therefore think there is a problem with the inflation target itself?

Dr Mark Carney: No. I have to write, as you said—you chose your words wisely—because I have to get on that and write one for next week because of the last inflation number. Since the inflation-targeting regime was put in place, 23 letters have been written, 22 since the global financial crisis. So it is helpful to go back and think about the causes of the overshoots, or in some cases undershoots, of inflation.

The principal cause, not the sole cause, has been some very large shifts in the level of the exchange rate, combined with what we were just discussing, which is that there is a persistent pass-through that plays out over several years. Immediately after the global financial crisis, there was a sharp depreciation—the exchange rate doing its job—and it has to be said in retrospect that, somewhat to the surprise of the then MPC, there was a bigger pass-through and that it lasted for longer.

A number of letters were written over that period, ultimately up to 15 letters, I guess. That was compounded in 2010-11 by a series of one-off price increases: VAT, most importantly, and tuition fees are two examples. With respect to the one-off price movements, it makes sense to look through. With respect to the exchange rate movements, there is a question of whether to lean against it. Depending on the cause of the exchange rate movement and other factors, there may be a case for leaning against it, given that it persists over several years.

On the question of the soon to be nine letters in which I have participated, the first batch was the recovery from that initial big depreciation: big depreciation, the financial sector gets repaired, the economy gets some steam in late 2012 and into 2013, and there is a rerating of the UK’s prospects and the exchange rate. That, combined with the collapse of global commodity prices, leads to a period of disinflation—very low inflation—in the country. We had quite stimulative monetary policy at the time. The rates were at their then lowest and there was still large amount of QE in place, and we took the judgment that we could work our way through this period of lower inflation, not least because real incomes were actually growing during that period and
so the economy did not need additional support, in our judgment. But that is a judgment, and people could take the other side. In this last period, the most recent overshoot is a product of this big exchange rate move. We have seen it coming and we think we have it balanced.

To finish on the framework, in 2013, towards the end of Lord King’s tenure, there was an adjustment in the annual remit to the framework which substantially improved it, in my judgment, which was that it made it clear that if the Bank, the MPC specifically, found itself in “exceptional circumstances”, it might take longer to bring inflation back to target, from either below or above, but it had to explain clearly why it was doing so and what trade-off it was trying to strike. That is exactly what has been the case in the recent experience after the referendum. We felt it was appropriate—we felt that inflation could go above 3% but most importantly we were taking a longer period of time than usual to bring it back to 2% because we wanted to support the economy during this period. Now that we are getting towards full capacity in the economy, it becomes a much more conventional decision on timing and stance of policy.

That is the culmination of the requirement for us to be explicit. For us to explain if circumstances are exceptional and then to be held to account for that means that the framework remains very much fit for purpose.

Q11 **Lord Livermore:** Given that, how might you evaluate the idea of shifting to a price-level target where past shortfalls might be made up subsequently by overshooting?

**Dr Mark Carney:** I thought about that just before I came here and was disabused of that—appropriately so. A lot of great minds have considered this over time and have considered the practicalities. Given that one of the big issues with moving to a price-level target in practice relates to the quality of statistics and the frequency of revisions, such as they are here, they are subject to fairly large revisions, so it is very much a moving target.

That said, it is difficult to change your target in the middle of very difficult circumstances. It is easy to advocate it, but in the throes of a financial crisis the chance of dislodging inflation expectations is more material than otherwise so you have to be quite deliberate about it. I am not advocating it for the UK per se, given the statistical issues, but as a general point, Ben Bernanke’s idea about pre-committing in certain exceptional circumstances that in a subsequent financial crisis you would be willing to move to a temporary price-level target is interesting, because it takes away the incentive issue around it. But in practical terms it would be very difficult to implement here.

**Baroness Bowles of Berkhamsted:** Are you hinting that you think our statistics are more problematic than in other jurisdictions?

**Dr Mark Carney:** Problematic is not the word I would use. It is just that the revisions to GDP tend to be quite substantial and persist for quite a
long period of time, so those are particularly not fit for purpose. We should reconvene in five years and discuss what actually happened in the run-up to the referendum, after the referendum—

**Lord Lamont of Lerwick:** We will not know any more then.

**Dr Mark Carney:** Yes, but there can often be quite a different picture, and when you throw in the nominal side it gets quite difficult.

**Lord Turnbull:** Is that a feature of being a more service-based economy: that it is more difficult to measure?

**Dr Mark Carney:** There is an element of that. There have been issues. The ONS is continually improving the statistics, but a few years ago, for example—it was outside the services side, on the investment side—the investment deflator became quite volatile, if I can put it that way.

**Lord Livermore:** Just one last question on inflation, if I may. Are you surprised that the ONS seems unwilling to correct known errors in the calculation of the retail prices index?

**Dr Mark Carney:** Well, there are, as you say, some known errors, acknowledged by the ONS and recognised by a number of external commentators. We would share some of those views about how the index is calculated, using the Carli method, which has an asymmetric bias, and how housing costs are implemented, as well as issues about clothing. So there are some known errors.

The ONS itself, to my recollection, has acknowledged those errors. In fact, that is one of the reasons why it downgraded RPI a while ago from being a national statistic. We all recognise that RPI is used in a number of extremely important contracts—from index-linked gilts to rail fares to student loans—so there is a challenge in improving the measurement and the consequences of improving the measurement for those stakeholders.

I would just observe that, given the acknowledged challenges with RPI, the first thing to do would be not to embed RPI further in contracts, particularly public service contracts. Secondly, given the quite significant values at stake for a variety of stakeholders if it was changed, it would be in everyone’s interests to have a deliberate and carefully timed transition, if there were to be any transition.

The last point to make is a meta point: it would be helpful to have just one public-facing measure of the cost of living for consumers. At the moment, we have RPI, which most would acknowledge has known errors. We have CPI, which is what virtually everyone recognises and is in our remit. Then there is the ONS’s favourite, if you will, the CPIH, which includes housing costs. At some point, it would be good to consolidate the focus on to one. Lest anyone thinks I am advocating changing the inflation target to CPIH, I am not at this stage, because it does not have the track record in place.

**Lord Livermore:** Would it be simpler to move away from RPI, for
example for student loans, as you mentioned?

**Dr Mark Carney:** As I say, it would be better not to further embed RPI. It would also be better, I would suggest—I would not be definitive about it—to move towards indexing contracts around a single preferred measure of inflation. My caution in raising CPIH is that if it were thought that at some point in the future that would be the preferred measure of inflation, one would not want to shift RPI to CPI and then to CPIH, to state the obvious. Given the monetary stakes in adjusting RPI, perhaps there is a way to sequence this to make all these decisions at the same time in an orderly way.

**Q12 Lord Burns:** One of the contracts that you mentioned, Governor, is indexed gilts. What are the consequences with regard to the holders of indexed gilts when there are such errors in the RPI? I remember years ago when I was in the Treasury, trying to make changes to the RPI, and I was told, “You can’t possibly make changes to the RPI. There are too many outstanding contracts to do with indexed gilts that would become a really serious problem”, but when I see that there are now, in a sense, accepted errors in the RPI, I do wonder about the legal position with regard to the holders of those gilts.

**Dr Mark Carney:** There is an RPI committee, which my colleague, Ben Broadbent, the Deputy Governor for Monetary Policy, sits on. My understanding of the legalities is that if in the judgment of that committee there has been a material change to RPI, the final decision is the Chancellor’s, for precisely the reasons you state: it could have material impacts on the holders of gilts. On any given day, I presume that stops a change in RPI or the work to change RPI or to switch from RPI to CPI. Coming in at the middle of the story, this seems to me to be one of those issues that we have to decide at what point in the future that change becomes acceptable. As a former Permanent Secretary, you know better than anyone that transition—

**Lord Burns:** They are still issuing them.

**Dr Mark Carney:** Exactly.

**Lord Burns:** On RPI.

**Dr Mark Carney:** Yes. There is a short-term argument that of course it is better to continuing issuing them on RPI because of the liquidity of the benchmark. I understand all those points, and the DMO does a fantastic job, but we would not want to be in the same position 10 years from now.

**Lord Burns:** Okay. I do not quite see how we get out of it.

**Dr Mark Carney:** With these very difficult decisions—I have seen this in the past; I saw it in Canada—in the end you have to pick a date, and it tends to be seven, eight or 10 years down the road, at which point you will have transitioned off and then work back.
Lord Burns: And then it is in the market.

Dr Mark Carney: And then it gets into the market. The Bank of England’s view of the precise wedge between RPI and CPI is different. The market is wonderfully sophisticated in many respects, but sometimes it says, “Oh it is about 1%”. Our view is that it is 70 basis points. That is a big difference, aside from all the other issues we are addressing. If I may, Chair, if there is anything that this Committee can do, with farsightedness, to advance this process, it would be a real service.

The Chairman: There is a challenge. We can perhaps discuss that when we meet in five years’ time.

Following up on Lord Livermore’s point about student loans and this issue, to what extent do you think Governments of all parties engage in inflationary shopping—picking the measure that best suits their purpose?

Dr Mark Carney: I could not possibly comment on that. I stand by what I said earlier: given the known challenges, on a going-forward basis, it does not seem sensible to continue to use it, or to add to its use.

Q13 Lord Lamont of Lerwick: If we have finished on RPI, perhaps I could go off at a tangent. You have been very good in giving us a tour d’horizon. You have explained a lot of different things and how everything is linked to everything else. However, could you comment on one thing that is a background to everything that happens here, although to me it is a bit of a mystery: why has the dollar been so weak when the growth has been so strong and interest rates have been rising more than in other countries, and QE has been brought to an end or is being tapered? It seems a very odd phenomenon.

Dr Mark Carney: It is an odd and dangerous phenomenon for a central banker to comment on someone else’s currency. I will make a few general observations. First, I appreciated the President’s comments of last Friday on the dollar. Secondly, often it is not the current rates but the expected change in rates—basically what is discounted already and what is new news. The US economy is very strong, but relative to a strong US economy and arguably a strengthening US economy, are others strengthening more or in a more surprising way? Then there is an adjustment. Certainly, at present the fundamentals in the US are quite robust.

Lord Turnbull: You mentioned QE. Without trying to tempt you into telling us when interest rates are next going to move, which would not be appropriate, can you just explain the process by which unwinding takes place and what would actually happen in the real world? What would we expect to see, if and when it starts?

Dr Mark Carney: We are just beginning to see that process with respect to quantitative easing in the US as it moves to a period of gradual quantitative tightening. As you know, the US has smoothed the process. The crudest way of withdrawing QE would be just not to reinvest, but of course that becomes quite lumpy—it would be particularly lumpy in the
case of the Bank of England—so there is a smooth path for the Fed to return bonds to the market. One would expect that to influence the term premium on interest rates over time.

We will see how much the actual flow of net QE matters for the overall term structure of rates—and, again, a propos of the discussion with Lord Lamont, how much has already been discounted in the markets. It seems to us that you look at the amount of net QE, if I can use that term—in other words, purchases by central banks less new issuances by their relevant Governments—among the G4 economies, including us, in 2012 the equivalent of about $1 trillion of new bonds came into the market from those countries, despite the fact a number of us were purchasing bonds. For the subsequent four years, in effect there were no bonds coming in and slightly negative bonds being taken out. This year we will return to about $1 trillion, and potentially $1.5 trillion next year, so it is quite a big swing in terms of the flow of securities into the market. We will learn something from the behaviour of asset markets over this year.

The view of the Bank of England and the MPC—and we are on record with this—is that, first, we want to get interest rates to a level where we think there is material room to use the interest rate as the preferred instrument; in other words, if we needed to subsequently lower rates, we would have enough room to make a material difference to the economy. We would want to get to that position before we would start to reduce our balance sheet, but we are very conscious about the predictability of any action, so it would be well telegraphed.

Finally, we are committed to co-ordinating any action with the Debt Management Office so that the UK as a whole has the most cost-effective financing of the Government and the best effect on financial conditions. Obviously, we will be watching what happens very closely over the year, because the one thing we know about QE is that, when it comes to theory versus practice, the practice is quite distinct from the theory.

To be specific, the so-called portfolio balance effect really should operate on the stock of bonds that are in the market. If you take a stock of bonds out of the market, you displace those investors and they move into riskier assets. The stock should be what matters, but most event studies show that the flow has been much more important than the stock. So we are about to see another flow effect even though it has been well telegraphed. We will see how that transpires.

Q14 **Lord Kerr of Kinlochard:** Turning to the problem of persistently low productivity, when you first spoke to this Committee four and a bit years ago—I was not a member—you were confident that this was a cyclical phenomenon, not a sickly phenomenon, and would come right. Are you still confident about that?

**Dr Mark Carney:** I am less confident than I was then. The reason for the confidence then was that the experience following financial crises—I can cite Reinhart and Rogoff as the definitive work on this—has been that there is a very big hit to the level of productivity, and then subsequently
productivity growth returns more or less to its pre-crisis trend. There are many explanations for that, but the simplest is that there is disarray in the financial sector, there is great uncertainty, people are not investing, they cannot get access to capital, so there is a period when there is a hit and then the economy starts to return to better functioning.

We had the hit—the 6% level shock—but we have had very poor productivity growth, which is the reason for your question, in the order of 0.5% per year versus 2% average over the longer term prior to the crisis. A colleague of mine, Silvana Tenreyro, gave a very good speech on this last week that disaggregated by sector where the shortfall is—largely finance and manufacturing, a bit in ICT and a bit in real estate. The impact on finance one can understand, given that part of it was ephemeral prior to the crisis, and the deleveraging effect in finance has a big impact. That should be going away, so we should see some of that come back. Manufacturing had a very strong burst of productivity prior to the crisis. Again, this is probably affected more by underinvestment that has persisted. We need to put some of this in context.

The path of investment since the financial crisis has been the weakest for 50 years, basically back to when reliable records were put in place. The so-called capital deepening channel has been quite shallow, and that has arguably resulted in half of the reduction in productivity growth. The other is through so-called TFP, or process: pure innovation and process changes.

To cut to the chase, our broad-brush view—and we are in the process of updating it—is that we expect some pickup in productivity of similar orders of magnitude to the OBR, to 1% or 1.25%, so not back to historic averages, over the next few years. I would be encouraged by the fact that in part we are seeing a much higher degree of churn in the labour market. One of the simplest avenues of productivity growth is individuals bringing better ideas from the top-of-class firms to the middle or longer-tail firms, or setting up their own firms in a way that disseminates innovation across the economy. As Andy Haldane, our chief economist, pointed out, one thing that has happened over the past decade is that the tail of unproductive firms has gotten quite long, and the diffusion process of innovation has stalled somewhat.

I am less confident, certainly about the order of magnitude of the return. We do not see 2% on the monetary policy horizon, but we do see signs of a firming of productivity of productivity growth.

Lord Kerr of Kinlochard: Our efficient staff dug out for us last week’s speech at QMU, and we thought we saw a difference in it from the Haldane analysis, in that she said that it is financial services and manufacturing, whereas Haldane argued, we thought, that it is not financial services’ fault, it is across the piece. Has the Bank’s view moved on: that the problem now lies principally financial services and manufacturing?
Dr Mark Carney: It is possible that they were talking about different time periods. It was across the piece for that initial shock and, given that Andy’s analysis was a few years back, as I recall, that initial shock would have dominated, but on a flow basis, Silvana Tenreyo’s work indicates that yes, principally it is financial services and manufacturing. Having looked at the same data that she and others compiled, I would agree with that.

Baroness Bowles of Berkhamsted: I have two unrelated questions. First, do you still consider that the overall level of household debt is a risk to financial stability? In particular, are lenders in a spiral of complacency? Perhaps harking back to statistics, do we have enough available data on household debt to get the full picture?

Dr Mark Carney: The short answer is yes. The Financial Policy Committee views the level of household debt as one of the main risks to the economy. We should have some context, though. First, British households have worked hard and paid down about 20 percentage points of that debt since the financial crisis, and while the level is still elevated it is much less than it was previously. From a debt service perspective, they are in much better shape than they were prior to the crisis. Debt ratios are a little more than 7.5%, versus a 9% average prior to the crisis.

Most importantly, the number of very highly indebted households has gone down quite significantly. I believe from the report that 1.4% or 1.5% of households pay more than 40% of their income into debt service. That is where you get a real kink. Not much has to happen before people get into trouble and cannot pay their debts once you are at those levels. To put that into context, that is now 1.4% of households today; 2.75% was the longer-term average for those highly indebted households.

We are in a position where the overall is high, but getting down into the data, into the cohorts, if I may put it that way, of households gives us greater confidence. I think you used the term “spiral of complacency”; I wrote it down. We get concerned that, when times are relatively good, underwriting standards start to slip, people get overlevered, and that cohort of more vulnerable households increases quite rapidly. That is where institutions can get into trouble.

Our principal concern in the past year has been about consumer credit as a whole. Even though consumer credit is just under 8% of the overall household debt in the country, in our tough stress test it accounted for 40% of the losses to banks. That is why we have, through the PRA, heightened supervisory scrutiny of the underwriting standards, and there have been capital implications for some banks in terms of capital add-ons, but that is the value of a stress test.

Lastly, on the mortgage market, we have run the banks through really brutal mortgage stresses—house prices down 35%, unemployment up to 9% and interest rates up by 400 basis points—and, in effect, the banks are very well capitalised for those types of risk, but the risk to the
economy of a continued increase in highly indebted mortgages is much more significant, because while people are paying back the banks, they are not spending on anything else, and that can exacerbate the economic cycle. That is why we put protections in place a few years ago to help to manage that overall cycle.

**Baroness Bowles of Berkhamsted:** My googly question is: are you concerned about the increasing amount of real estate transactions that are being funded by bitcoin? This is becoming a more normal thing in the United States. I have been contacted by hedge fund managers here in the UK who are beginning to be concerned about it. The FCA is less concerned, because it seems to think that it makes the property not liquid, but it is happening: I have seen a house advertised as for sale only by bitcoin, and things that happen in the States tend to come here eventually. You may not have looked at it, but I would be interested to know.

**Dr Mark Carney:** I would just make a general point, which is that there is concern, particularly at the international level, about the increased uses of cryptocurrencies. A lot of the underlying use case for those currencies has been illicit activity, particularly money laundering—I am speaking away from those who are purchasing the currencies to speculate on potential increases in their value. We at the FSB-G20 level face decisions in future about the extent to which cryptocurrencies in general—bitcoin would be included in that—should be integrated into the formal financial system, how easy it should be to convert bitcoin into sterling or dollars, and whether there should be any anonymity when you do that.

The Koreans came to the conclusion—I have spoken to the US Treasury Secretary and others who have come to the same conclusion—that, no, there should be no anonymity, because otherwise you could be closing a chain that had illicit activity somewhere along it. One does not have anonymity for bank account transactions. Why would you for cryptocurrency transactions? We face issues with that and related issues, depending on how integrated cryptocurrencies are to the system, of potential channels of financial stability. I know we will discuss these when we next meet at the end of March.

To your specific question, it strikes me that that is out of our direct competence. It is the type of thing that should be monitored within the broader context of what we do with cryptocurrencies.

Lastly, in parallel with the type of preventive, risk-management work that the G20 does, there is a huge range of opportunities, including in this country, to improve payment systems, which will make a real difference to the customer experience. While we are addressing issues over there, we need to be working hard to take advantage of these technologies more broadly.

**Lord Livermore:** To follow on from Baroness Bowles’s question about household debt, as I understand it, since 2012 there has been an average
annual growth rate of 20% in car finance, which represents three-quarters of the total growth of consumer debt. The vast majority of that—80%—is through personal contract purchases. To what extent are you concerned about that expansion of motor finance?

**Dr Mark Carney:** We have looked at it, as inevitably we will look at any part of the financial sector that is growing rapidly. You rightly quote the 20% figure for car finance.

The orders of magnitude of overall risk are more modest, for a couple of reasons. First, household debt is of the order of £1.3 trillion or £1.4 trillion, so it is a small number relative to the overall. Secondly, the overall level of PCP debt includes something for which you or I, if we are on a PCP contract, are not responsible, which is the balloon payment at the end for the car. Actually, there is more risk for the lender about the residual value of the auto when the contract ends.

The third point is that about half of that car finance is from the motor vehicle manufacturers—their finance companies themselves. When you strip it all down, as we have in the financial stability report, the UK banks’ exposure to this—the exposure of the core financial system—is about half. If you stress that and say that we have a recession and the value of the car is 20% less than the residual value in the contract, it works out to about six basis points of capital, total capital being of the order of about 16.5% at present, so it is interesting but it is not that important.

That said, there is a series of issues for the FCA and consumer protection, making sure that this is one properly, but, from the Bank of England perspective, we have looked at it and we are quite comfortable from a financial stability perspective.

**Lord Kerr of Kinlochard:** My question is a wild card. Today’s press reruns the very familiar story that we believe that we export more in services to the United States than we buy from the United States, but the United States’ numbers show that they export more to us than we to them. This has certainly been the case, for statistical quiddity, for at least 20 years. It was true when I was the ambassador over there.

If we are attaching great importance to future trade in services—we say that it is 80% of our export trade—should we be worried about the difficulty of valuing trade in services?

**Dr Mark Carney:** We should always be worried about improving statistics. The short answer is yes, we should work hard on that. With all these trading decisions—and the country will make more trading decisions over time—it is very important to think about the relative opportunities set across various industries, not just today but dynamically in future, to make the right trade-offs. In the end, that is what trade is about.

Irrespective of statistical discrepancies, it is safe to say that the UK has revealed comparative advantages in services in general, in financial services, creative services, IT and other services that are growing very
rapidly as part of global trade and have the prospect of continuing to grow very rapidly. So when it comes to focusing attention on which are the most attractive areas for potential trade agreements, services are one of them.

One of the criticisms of free trade and globalisation more broadly is the concentration of the benefits. There is potential through broader services liberalisation to spread the benefits more broadly across the economy, given the relative weight of services in the economy. There is a fundamental economic point, but there is a political economy point as well.

We should measure it better, but this country has a huge opportunity in services and we should look to develop that in every circumstance.

The Chairman: Governor, I am very conscious that you have answered a lot of questions. You have been here for almost two hours. We are extremely grateful to you for your full and helpful answers. That concludes this sitting of the Committee.