HOUSE OF COMMONS

Treasury Committee

Oral evidence: Bank of England Financial Stability Reports, HC 549

Wednesday 11 January 2017

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Watch the meeting

Members present: Mr Andrew Tyrie (Chair); Mr Steve Baker; Helen Goodman; George Kerevan; Kit Malthouse; John Mann; Chris Philp; Mr Jacob Rees-Mogg; Rachel Reeves; Wes Streeting.

Questions 120 - 196

Witnesses

I: Dr Mark Carney, Governor, Bank of England; Alex Brazier, Executive Director, Bank of England; Martin Taylor, External Member, Financial Policy Committee; Professor Anil Kashyap, External Member, Financial Policy Committee.

Examination of Witnesses

Dr Mark Carney, Governor, Bank of England; Alex Brazier, Executive Director, Bank of England; Martin Taylor, External Member, Financial Policy Committee; Professor Anil Kashyap, External Member, Financial Policy Committee.

Q120 **Chair:** Thank you very much, all four of you, for coming in to give evidence to us this afternoon. I feel I should begin by asking you, Governor, whether you agree with your chief economist that the Bank of England has been having a "Michael Fish moment" or, as he suggests, two of them.

***Dr Mark Carney*:** One of the advantages of banishing groupthink is that one does not always agree with everything that is said by colleagues. The core point that Andy Haldane tried to make—no disrespect to Mr Fish, I should say—pertains exactly to what we are talking about today, which is the ability to identify risks to financial stability and the poor performance of most in the economic profession, including some of the major public institutions and the Bank of England, in identifying the major risks prior to the crisis.

He suggested some solutions to that and we can go into them, but it goes to the point that our responsibility with respect to financial stability is to think about risks in the tail, identify them, describe them and, where possible, take mitigating actions. The problem with success is that the risk does not materialise or does not seem major, so perversely success is an orphan in the financial stability space.

Q121 **Chair:** We did not have a Michael Fish moment because, in this case, the forecaster can influence the outcome.

***Dr Mark Carney*:** With respect to financial stability risks around the referendum, I do think we helped to make the weather, if I can say that. Meteorologists predict the weather; we helped to make the weather in that we catalysed contingency plans, actions, pre-positioning of collateral, other steps with other major central banks and better risk management, which helped to ensure that this was a smooth process and put the country in a better place to take advantage of the opportunity.

Q122 **Chair:** In that case, have you made the weather to the point that it is sufficiently stable for you to conclude that Brexit is no longer the most significant near-term domestic risk to financial stability?

***Dr Mark Carney*:** That is the conclusion that we came to by the time of the November report.

Chair: I am asking you whether it is still your conclusion.

***Dr Mark Carney*:** That was the case then, yes, and we have not come together as a committee to do an updated assessment. That was our last assessment.

Q123 **Chair:** So it is still your view, notwithstanding your success with making the weather.

***Dr Mark Carney*:** Sorry, maybe I was misunderstood. We said that the biggest risks to financial stability in the UK are global and non-Brexit related. We will set those aside. We identified the four major domestic risks to financial stability—current accounts being a crossover risk between international and domestic—in detail in the report. The process of adjustment that this economy is going through has some potential to amplify those risks, but they would be there even if we were not leaving the European Union. There are financial stability issues related to the transition from where we are today to the exit. I am sure we will get into them. There are steps that we can take to help mitigate those.

I will make a general point, which is my view, not a settled view of the committee. The financial stability risks around that process are greater on the continent than they are in the UK. I am not saying that there are not financial stability risks to the UK, and there are economic risks to the UK. However, there are greater financial stability risks on the continent in the short term for the transition than there are for the UK.

Q124 **Chair:** That is because of eurozone instability and the need for the eurozone to have access to stable capital markets.

***Dr Mark Carney*:** Yes. The high-level point is that there is tremendous capacity, depth and breadth of financial services resident here in the UK: people, capital, institutions, plumbing, wiring and regulatory constructs. At the point of leaving, depending on the nature of a transition phase, implementation phase, grandfathering phase—whatever you want to call it; these are different words for what I see as the same thing—capacity will be taken out because certain institutions are not authorised, people are not in the right place, capital liquidity is not in the right place. Again, this varies with transition. That is more likely to affect Europe than the UK. It will affect the UK as well, but in my view it is a greater risk for Europe, and we touched on a bit of this at the last MPC hearing.

Q125 **Chair:** Just to be clear, Brexit is still the most significant near-term risk.

***Dr Mark Carney*:** The committee has not termed it that way. What the committee came to a view on was that we have four domestic risks. The process and issues around Brexit amplify some of those risks, without question. The overall level of financial stability risk to the UK is elevated.

Q126 **Chair:** I will try to take you to a "yes" or a "no" on it.

***Dr Mark Carney*:** Strictly speaking, the view of the committee is no. I will expand on that. In the run-up to the referendum, we felt that it was the largest risk because there were a series of positions and possibilities in the financial sector, things that could have happened, that would have had consequences for financial stability. Because we viewed it as the biggest domestic risk, the £250 billion sterling equivalent of collateral was pre-positioned with us. That is why supervisory action was taken. A number of other actions were taken to mitigate that. We would like to say that had some success; it was not entirely coincidental. Having got through the night and the day after, the scale of the immediate risks around Brexit have gone down for the UK. The process can amplify them. There are smoother and more orderly ways to have that process.

Q127 **Chair:** You heard the evidence yesterday, and we had a very brief word about it a moment ago. Do you agree that the stability risk to Brexit will be considerable unless a standstill or transitional arrangement after the completion of the negotiating period is itself negotiated, and that we need to negotiate that at or near the start of the Brexit negotiations—that is, very soon? They were the two key points that came out of that part of our discussion on transitional risk.

***Dr Mark Carney*:** I agree that it is absolutely in the interests of the United Kingdom and the EU 27 that there is an implementation or transition phase, and ideally that it is agreed early on in this process.

Q128 **Chair:** I am not really asking you whether it is ideal. I am asking you whether it is necessary in order to avoid quite severe financial stability risks, because those were what were described to us yesterday.

***Dr Mark Carney*:** It is the best mitigant to those risks, yes. It is welcome.

Q129 **Chair:** Is it necessary?

***Dr Mark Carney*:** It is highly advisable. If there is not such a transition put in place, in our view, there will be consequences. We will work to mitigate those consequences as much as possible and, to repeat myself, in my view, those consequences would be greater for Europe than for the UK, but there would be consequences for the UK.

Q130 **Chair:** Do you agree with the point made by Douglas Flint of HSBC in particular, although others made it yesterday as well in their own way, that we are playing Jenga? I think he described it as us trying to restructure particular pieces of the financial eco-structure. Do you agree that this is a very risky game and that the safest thing to do is try to negotiate, as far as possible, a status quo to the shape of that financial infrastructure?

***Dr Mark Carney*:** It is a decent analogy. Just like when you play Jenga and you start early on, there are some pretty obvious pieces that you can take out without really imperilling the tower.

Q131 **Chair:** Which ones are those from the current structure?

***Dr Mark Carney*:** I think we all recognise that most cross-border retail financial services are relatively straightforward. It is a matter of debate, again from a financial stability perspective, as to what is established in terms of a permanent arrangement on cross-border lending. This depends on some of the questioning yesterday around third-country direct access and how those rules are interpreted and will be over time.

Let me make a definitional point first, and then I will continue. Rather than getting bogged down in whether it is called equivalence, passporting or part of a bespoke trade agreement, or whether it is the use of existing workaround arrangements such as third-country direct access, the issue is around the permanence or the stability of access for cross-border financial services between the UK and the EU 27. I would concentrate on wholesale financial activity, derivatives markets including clearing but not exclusively clearing, transactions and structuring, cross-border security sales and trading. FX should be relatively straightforward, but it is necessary.

It is obvious, although it bears emphasising, that delegated portfolio management should be secured. It is absolutely in the interests of the EU 27 for that to be the case, but the United Kingdom would want that to be secure. If there are elements of those activities—and those are pretty broad buckets—for which the stability of access is called into question, it starts to raise economic issues in terms of the amount of activity, but it can also raise issues of financial stability.

I would like for one second, if I may, to expand on that. One of the issues we have, to put a point on the financial stability risk, is that there are currently very deep, liquid and broad hedging markets that operate within the European Union, including the United Kingdom. They are principally run out of the United Kingdom. For example, more than three quarters of derivative transactions are run from here. That is not just about clearing; those are the actual transactions.

Financial institutions and, very importantly, corporates rely on the continuous presence of those hedging markets. If the collective "we" on both sides of the channel are caught in the position where the main counterparties for those activities no longer can transact those activities and cannot help companies dynamically hedge, that will draw liquidity from markets and take out capacity from markets. It can hold up transactions and it can cause unforeseeable moves in markets, with collateral implications. It can cause the Jenga example.

Now, the Jenga example in this case is a transition point. I do not want to misquote Douglas Flint, but I believe he was also making an economic point, which is that, in the longer term, the reason there is an ecosystem here is that having at least £6 trillion of assets under management, having derivative expertise, having the legal and other expertise centred in the United Kingdom is self-reinforcing. At some point, losing elements of that could have outsize effects. These are some of the judgments that the Government will have to make, in the context of much broader judgments for an overall new relationship. We fully recognise that we only see one sliver of the bigger picture, an important sliver though it may be.

Q132 **Chair:** You said earlier that the Jenga risk, although you did not call it that, was greater for our continental counterparties than it is for us in the financial stability risk field. Are you getting that message across to your counterparties, and what are they telling you?

***Dr Mark Carney*:** I am making the point, yes.

Chair: What are they telling you?

***Dr Mark Carney*:** I do not want to betray confidence. We all take our responsibilities, as you would expect, seriously.

Q133 **Chair:** What are they telling you? Are they saying, "No, no, Dr Carney, you are completely wrong; you have got this wrong?" or are they saying, "We agree with you, but we are doing our best"?

***Dr Mark Carney*:** You are asking me to tell you what they are saying.

Chair: Yes, I am, but not with names.

***Dr Mark Carney*:** That is not how it works.

Chair: I am not asking you to tell me what they are saying individually. I am asking you to give me a feel without attaching name badges.

***Dr Mark Carney*:** I will answer it with numbers. If you rely on a jurisdiction for three quarters of your hedging activity, more than three quarters of your FX activity, half of your lending and half of your securities transactions, you should think very carefully about the transition from where you are today to where the new equilibrium will be.

Q134 **Chair:** So we have a lobby group ready and waiting to help us point ourselves in a sensible direction, to the avoidance of the Jenga moment.

***Dr Mark Carney*:** Those who are involved in the managing of risk, first and foremost, in the private sector—not just talking about it but managing it—and those public officials whose remits are to ensure that it is appropriately managed cannot help but be seized of these issues.

Q135 **Chair:** Fortunately, they are. That is good to know. Your colleagues have at various points given, from their facial expressions, some hints of further thoughts they might want to add, but I may be maligning them. Can I just ask if any of them want to add anything before I pass the questioning on?

***Alex Brazier*:** I don't think so, except to say that on the numbers, on the final point, in large part they speak for themselves. The UK's exports of financial services to the EU are £26 billion. The UK's imports from the EU are £3 billion. Those numbers speak for themselves.

***Professor Anil Kashyap*:** I am sure that the people who are directly involved in managing risk and supervising it might be like-minded. I am not sure that constitutes a lobby, because these issues are only part of what is going to be discussed and I do not know how effective it will be. However, I believe everybody who is on the ground dealing with these things sees it the way that the Governor has just described.

Martin Taylor**:** I would stress the importance of getting any transitional arrangements in place as soon as possible, for the very practical reason that if you are running one of these institutions and you are Douglas—we heard some of this yesterday—you have to fear the worst. The worst is if Article 50 is triggered in March and we are out of the Union two years later with no arrangements in place. You have to be certain that your institution can handle that position and, at some stage, you will start taking really quite trenchant steps.

Chair: It is the question of exactly those concerns for members of this Committee that has led us to trigger an inquiry into transitional arrangements.

Martin Taylor**:** I would applaud that, Mr Chairman.

Chair: That is what the hearing was part of yesterday.

Q136 **Wes Streeting:** I want to begin where the Chairman left off, focusing on the financial stability risks from Brexit in particular and what we can do to mitigate them. Starting with you, Governor, the last time we saw him, Sam Woods identified reduced market access, reduced regulatory co-operation and greater complexity of firms as the three key risks from Brexit. From the FPC's perspective, what level of market access do you think we should be aiming at to prevent any of those major Brexit-related risks from crystallising?

Dr Mark Carney**:** From our perspective, we would concentrate on the wholesale markets in general, particularly in the securities sphere and the derivatives sphere. Those are the ones that are most prone to financial market fragility, in other words discontinuous changes in their depth and in their capacity that would have a potentially unanticipated effect on access here in the UK.

The cross-border lending markets are important. I do not want to downplay them. However, it would be reasonable to think that the balance sheet capacity both existing here—and this is relevant to the stress test work that we have done on where credit demand is in the UK—and supplied by third countries would be reasonably sufficient for a two-year-plus time horizon to address that. At the core, considering cross-border securities and cross-border derivatives, it is absolutely in the interests of all parties that some arrangement can be found to maintain market access.

Q137 **Wes Streeting:** One of the challenges that we will have in our domestic debate, as we keep an eye on what the Government are doing, is separating out the trade-offs that we have to make as a country between our economic interests and the politics around this. Those are different issues, but there is a mirror challenge across the channel among the remaining EU countries. In helping us to separate the politics and the economics, in terms of the risks you set out and the key priorities, are the confines of the existing rules on equivalence within the EU, such as MiFID II, sufficient to mitigate the risks you have outlined to us this afternoon?

***Dr Mark Carney*:** It is a very good question, because it allows me to flag another potential financial stability risk in the longer term. I am trying to think of a polite way to put it. We do not want to be a rule-taker as an authority. Right now, we are not a rule-taker; we come to a consensus within the EU, and we might not always like the end result, but in general we feel that the regulatory construct in the EU is broadly as we would have it with respect to safety and soundness. There are other issues that people may disagree with. We have outlined specific things that we would change if we were able to overnight, and that is something the UK will consider in the fullness of time. Others will have different lists.

In general, we like it, but the rules in the EU are influenced by international standards and by the presence of UK officials in their development. Once we are not there, one would expect increasingly rules with which we do not agree and which may cause risks to financial stability. That goes to the equivalence point, which is: on what grounds is equivalence granted, and is equivalence granted in a way such that we are a rule-taker? In other words, we have to basically cut, copy and paste any change that is made in Europe, in order to maintain equivalence.

Alternatively, if I can wear my chair of the FSB hat for a moment, is equivalence viewed as it should be cross-border, with rules that achieve equivalent outcomes in terms of safety, soundness, consumer protection etc.? You can have slightly different approaches but achieve roughly the same outcome that recognises different institutional structures and other aspects. We should very much want the latter, because that allows us to tailor our system to the fact that we have the world's leading global financial system and to the nature of UK law and other peculiarities. We should want that.

If we were going to have equivalence, we would want that recognised up front. That then requires some way for the two sides to make continuous judgments about whether or not they are equivalent. As you will have heard and as you know, you do not want equivalence that is there on day 1 and is taken away the next year. Again, we want stable access. There are various ways to determine how you would maintain equivalence, if that is the route that the Government and the country go down.

One of them is with reference to international standards. You are equivalent if you broadly meet international standards. They are high, and, whether it is the IMF or the FSB itself through peer review, countries are judged on whether or not they meet international standards. If you meet international standards in slightly different ways—sometimes you are super-equivalent—then you are still equivalent. If that is what is agreed, that is very sensible and, as a financial stability authority, we would look at that and say it is broadly okay.

The second thing, though, that is likely to be necessary, if we were in a trade deal-type arrangement, and I am not going to prejudge that—

otherwise, we would be relying directly on the MiFID II equivalence as written, I would suggest—is some form of dispute resolution authority, which is not a UK one or an EU one but, as in a trade deal, is a separate panel of experts and is able to make judgments only in those cases where it is a matter of dispute, as opposed to generally meeting equivalence.

On top of that, we should want domestic protection to have some sort of institutionalisation of regulatory co-operation between ourselves and Europeans, and they will want the converse, because if we are going to have free and seamless access in wholesale markets, we want some comfort that the rules are being applied and supervision is robust on the counterparties for your major financial institutions. One could start from equivalence, but I would suggest from a financial stability perspective that one would want to build on that equivalence with other institutional structures.

Q138 **Wes Streeting:** There is a lot in that comprehensive answer. You have anticipated some of my further questions. There are a couple of things I want to probe a bit further on, before moving on to other issues. Because of the hats that you wear, which you have already alluded to, you have a pretty unique perspective on how the EU reaches equivalence determinations with other countries. You have seen it with the United States and Canada. It sounds to me, from the answer that you have given and the improvements you would like to see through a future deal, that you do not think the process as it currently is is sufficient for the UK's needs. You have not painted a picture of a process that works particularly well in terms of safeguarding our interests.

***Dr Mark Carney*:** The scale and breadth of equivalence that would be desirable, in my view, would warrant more of an institutionalised and symmetric structure between the two parties. If I can put it this way, where equivalence is granted with respect to central clearing, it relies on some element of proportionality in the scale of the activity, and, in effect, the stability of that relies on a form of mutually assured destruction. If it were taken away overnight, the market would have a version of the capacity problems we were talking about earlier.

If you sit down between two parties, as will happen, to determine how to structure this relationship, it can be made to work, but it is not ideal. Once it comes across a wider range of activities, some of which are untested—MiFID II equivalence is coming in, as you know, but has not been implemented—it would be in our interests to have both. We would want to avoid putting ourselves in a position where equivalence requires cutting and pasting inevitable changes to EU regulation that may not be suited to the UK.

After all, as we tried to highlight a year and a half ago, in terms of the ongoing relationship with the then EU if the UK had stayed in, one of the things from a financial stability perspective we felt that the UK needed to preserve was the ability to have flexibility. Quite frankly, it is flexibility to have additional buffers. Given the fact that we have a financial system that is 10 times GDP, we just have different requirements. There are also different requirements in terms of UK law and in terms of the ecosystem that is here.

I will just make the financial stability point. It is not ideal to go out and lose the ability to influence the rules. It is not exactly like that in terms of the EU-US relationship, but it could become that in central clearing, as it is defined in EU law.

Q139 **Wes Streeting:** That takes me neatly on to this big issue around our influence over rules when outside the European Union. Before that, very specifically, based on the fact that we are implementing a whole range of rules and requirements as members of the European Union, having shaped the rules, at this stage, are there any substantive reasons, as opposed to the political reasons that might exist, that the EU would not reasonably grant the UK equivalent status based on our existing position?

***Dr Mark Carney*:** No, I do not think so at all. That cannot be justified on prudential grounds.

Q140 **Wes Streeting:** We will have to just do it through politics.

I am conscious of time, but I have a couple of important issues I want to cover on financial stability before handing on. This is a political question in some respects, so you might not want to be too drawn into it. You know the views across the channel. You know the personalities and you know the mood. It is desirable, in our national interest and in the European Union's interest, to continue to have the mechanisms you described where we can still effectively shape the rules that we would be adhering to. First, do you think it is possible to negotiate that kind of arrangement?

I would like to throw out my second question to the wider panel. Trade and financial services may be concerned with our membership of the single market, but there is nonetheless a lively debate taking place about our membership of the customs union. Has the FPC taken a view about the desirability or otherwise of remaining a member of the customs union? Irrespective of the FPC's collective view, I would be interested to know the individual views of members of the panel.

***Dr Mark Carney*:** It is possible, and I will reinforce the possibility by saying that it is desirable. It should be enough that it is desirable for the reasons we have been discussing on both sides, from a financial stability and, I would argue, an economic perspective as well. However, it is also desirable because this is how the global system should work for cross-border capital flows in wholesale markets.

The EU and the UK start from a position today where we have the same rules, the regulators are known to each other and it is a tightly wound ecosystem. We are talking about wholesale finance. If we can come to an arrangement for this roughly along those lines, that is an arrangement that could be replicated by both sides for other major financial centres around the world, to the betterment of the global financial system. Therefore, it is not only possible but desirable.

With respect to the customs union, we have not taken a view on that and, as you suggest, I have no intention of being drawn into that discussion. My colleagues may.

Wes Streeting: The Governor has elegantly sidestepped the question of what he thinks about membership of the customs union, but I am interested to know if any other members of the panel have a view.

***Alex Brazier*:** I will not walk right into that. The issues are as the Governor laid out. The key issue in terms of financial stability is avoiding a situation where we do not have the flexibility to set the high standards we need to have a financial system that is 10 times GDP. Regardless of what happens, the UK will have a very large financial system relative to the size of the economy. Anything that compromises our ability to set those high standards, to respond to the risks as they change and to adjust as we learn more about regulations is detrimental to financial stability.

Against that we are weighing the desirability, for financial stability purposes, of having some form of market access to preserve diversity in the financial system, which is good for stability, and to preserve simplicity and transparency in the financial system, which is another thing market access gives us a bit of. Both of those things are good. I do not pretend that finding an arrangement that delivers both of those things—the flexibility and some form of market access—is easy.

Building on what the Governor said about existing equivalence agreements, this may be naive, but there is an opportunity here for the UK and the EU to do something that is not just in the mutual interests of both sides, but leads the way for the rest of the world. We need to develop those equivalence agreements on a global level to be more robust, more sustainable and more flexible.

Q141 **Chair:** That is a very powerful point. Have you written down what that might consist of?

***Alex Brazier*:** It consists of many of the things the Governor described in the earlier answer.

Chair: It might be handy to have a look at it written down.

***Dr Mark Carney*:** Sure.

Wes Streeting: Alex will follow the Governor's lead, but you are external, so you can give us your opinion.

***Alex Brazier*:** I do not think you should read that into the public record.

***Martin Taylor*:** On the customs union, it would simply be rash and premature for us to say anything at the moment. We may come on to it. On the equivalence, I very much agree with Alex's remark. It is worth saying that the equivalence regime as it exists was never designed for a situation such as the one we now face. If a Lebanese asset manager wants to sell into Cyprus, one could imagine the equivalence regime might be relevant, but it is not for a gigantic relationship of the sort we are now talking about, which will need special rules of its own.

***Professor Anil Kashyap*:** I agree that this is not a zero-sum situation. I also agree that the system we have was not designed to work for the possibilities that are contemplated on the outside. We have not talked about the customs union. In our remit, it would take a cascade of things for us to be drawn into that. We are focused on financial stability. These negotiations are going to wind up somewhere, and we think the transitions are very important. That is where we have been focused.

Chair: Like yesterday's hearing, the questions and the answers are taking up slightly more time than planned. That is because you are saying some very interesting things.

Q142 **Mr Jacob Rees-Mogg:** Good afternoon and a prosperous new year, as I believe the Bank of England nomenclature has it, to all of you. I would like to start with Mr Taylor and Professor Kashyap on the issue of Brexit—what effect you think it may have on the FPC's ability to meet its objectives, and what changes it may bring to any of your procedures or your ways of looking at stability.

***Martin Taylor*:** It rather depends on the result of the arrangements we have been talking about. Were we to go for a super-equivalence regime and basically have to cut and paste European rules, we would lose a considerable amount of ability to manage financial stability in the UK. That would be rather a perverse kind of Brexit, it seems to me. Otherwise, we will wait to see how things turn out. There are still so many possibilities.

***Professor Anil Kashyap*:** I agree with that and with the way Alex put it. The committee has said several times that it is our intention that the standards of regulation and safety that will be here afterwards will be at least as high as they are now. It is an important thing that we do not contemplate any kind of low or light-touch regulation. We will resist that as best we can. It is important that we have the flexibility to continue to make the right rules.

Q143 **Mr Jacob Rees-Mogg:** Are you surprised by the lack of effect of the Brexit vote so far?

***Martin Taylor*:** In what sense?

Mr Jacob Rees-Mogg: In terms of financial stability, in that there has not been, as far as one can tell, any great impact on financial stability.

***Martin Taylor*:** We are still in the European Union.

Mr Jacob Rees-Mogg: Yes. However, the Bank was quite concerned about the vote before the vote took place.

***Martin Taylor*:** There are three phases, with different concerns applying to each. The first phase was surrounding the vote itself—we were concerned to make sure that the books were squared ahead of the vote and liquidity was provided. We were concerned in the immediate aftermath of the vote to act in a way that would promote business as usual. That is now behind us.

The third stage will be after Brexit has taken place, when we have new institutional arrangements, which we cannot as yet see. The second, which we are now in and may last two years and two months, five years and two months or however long, will no doubt throw up its own challenges. I do not share the sanguine views of some who say that, because there has not been an obvious economic problem so far, there will not be one in the future. We are looking towards a year when some economic conditions may be more difficult than they have been in the last six months. Some of those will be Brexit-related, insofar as they are affected by the fall in sterling. There is the question of investment confidence, on which we still wait to see. There is the question of what happens to real wages.

At some time, as the coming Brexit has become an established fact, it becomes difficult to disentangle what is down to Brexit and what might have happened anyway, because we lose the counterfactual. What we can do under these circumstances is to make policy as events unfold.

Q144 **Mr Jacob Rees-Mogg:** How confident are you, to use the Governor's phrase, that the Bank can continue to "make the weather" and that, therefore, these risks dissipate and the risks are taken care of?

***Martin Taylor*:** The Bank is larger than the FPC. The Governor speaks for the Bank. I would never claim that the FPC made the weather.

Q145 **Mr Jacob Rees-Mogg:** Professor Kashyap, would you like to add anything either of a meteorological kind or of a more economic kind?

***Professor Anil Kashyap*:** I will say two things. I agree with Martin that some of the things that the Bank did proactively ahead of the vote and in the immediate aftermath were important. I agree that we are past that. I want to reiterate the point that he made earlier that, at some point, businesses will have to make decisions so that they know they are viable on Brexit day plus 1. I do not know that the FPC can hedge that; if they take sufficiently defensive actions, that could be against everybody's interest. If you are calling that making the weather, I do not think the Bank or the FPC can essentially ameliorate that risk. My biggest concern is that, as a consequence of Brexit, we are going to have to make that leap and we are not far enough along now to have any confidence about how it is going to go.

Q146 **Mr Jacob Rees-Mogg:** Governor, I will move on to asking you some questions on forecasting, both in relation to what Richard Sharp said when he came before the Committee in July and questioned some of the assumptions that the Bank had made in relation to the desirability of investing in the UK economy, and in relation to Mr Haldane's comments. I am talking not so much about the Michael Fish ones, though they attracted a lot of intention, including the fact that Mr Fish's boss at the Meteorological Office apologised 24 years later for the errors, so we may ask you back in 2040, if we are all still going.

In his "dappled world" speech in early November, Mr Haldane raised some really interesting questions about what I think he called "methodological monoculture" and the concern that forecasters were so guilty of groupthink that it was very hard to get anything valuable out of them except in times of stability. You know that I have been critical of the forecasts the Bank made about Brexit. How can the Bank take account of what Mr Haldane is saying and get to a point where it is able to forecast when there are discontinuities?

***Dr Mark Carney*:** One of the ways we take account of what Mr Haldane says is by him being the chief economist of the Bank of England. One of the responsibilities of the chief economist of the Bank of England is the preparation of the economic forecast, which is why he is a member of the MPC.

Mr Jacob Rees-Mogg: His forecasts have been the same as everybody else's.

***Dr Mark Carney*:** His perspective is an input to that forecast and, as chief economist, he quite rightly spans a much wider remit than just matters monetary. We draw on that and a series of other people within the institution—I am going to answer your question—to help inform particularly the work of the FPC, which is less concerned, as you know, with the central tendency, the most likely outcome, than the tail, and, quite frankly, as you would expect a bunch of dour central bankers to be, was focused on the downside: focused less on how everything could turn out well than on what could go really wrong and where we could potentially mitigate that. We cannot always mitigate it. There is very little that we can do about the risks in China, to state the obvious, but we can help to address some closer to home.

The way we have to get better—and where, I would suggest, to some extent the Bank of England and the profession have got better relative to pre-crisis—is through a much more explicit focus on the tail: what could go wrong, as opposed to what is going right. That is informed by going to a much broader range of interlocutors, whether they are in academia or financial market participants, not just the core of the financial system but its fringes, and incorporating—this is where you get discontinuities—many more behavioural assumptions or perspectives that can lead to these jumps.

We have to continually ask ourselves what can go wrong. We do not have to see a ghost behind every corner, but we have to ask ourselves what can go wrong. I would like to use a different analogy for the crisis, concerning sub-prime. A lot of time was spent in analysing why there was not a problem in sub-prime, as opposed to looking at, if there was a problem in sub-prime, what the impact could be. Somebody can legitimately stand here and say, "Really? You ran a stress test with the whole economy going down 2%, commercial real estate off 30%, housing off 30%, unemployment at 9%, a market crash and misconduct all coming at the same time. Is that really a severe but plausible scenario?"

There was a member of the FPC in the initial rounds of developing some of these scenarios who said, "It is ludicrous and unbelievable, actually, not severe but plausible." However, the point is that you look at scenarios like this, you challenge yourself as a committee like this. If that goes wrong, could the system withstand it, and what does it show up that could be wrong in the system that could then be mitigated ex ante? That is what we can do to get better for the purposes of financial stability.

Q147 **Mr Jacob Rees-Mogg:** That has been happening since the crisis in 2008, but the forecasting around Brexit was just as inaccurate as it had been around the crisis, although the crisis was more extreme. More importantly, the Bank was not out of step with other economic forecasters. Broadly, the forecasts that were coming through were fairly similar to the Bank's.

***Dr Mark Carney*:** I would make two distinctions. First, with respect to this committee, the risk analysis around Brexit I think was right, and the steps that we catalysed helped to ensure that that was a smooth process. If you look at the positions of the institutions a couple of months before the vote and if you look at the probability that was assigned by the market and hard money in the market in advance of the vote—as you know, it was in the low teens or 10%, the night before the vote, that the vote was going to go the way it did—a number of major institutions would have been caught on the wrong side, potentially with shock amplified.

This is important. The reason they were not was that the Bank correctly identified, in my judgment, a risk to the financial sector of a certain outcome in the Brexit vote. It helped take that risk off the table, which made it smoother. There is a separate but related question that relates to the MPC's forecasts, which you may want to address, even though this is an FPC hearing.

Q148 **Mr Jacob Rees-Mogg:** Let us stick to the FPC. I want to clarify whether that is the issue around getting the banks to square off their foreign currency liabilities before the vote, which I know you were very concerned about.

***Dr Mark Carney*:** It is partly that. It is also the pre-positioning of the liquidity with us, which ensured that a wide range of markets, particularly derivative markets, were liquid. It was also ensuring globally that similar things were done, which we were able to do through a central banking and supervisory network and, through a demonstration effect, could get others to do.

Then of course it mattered that, on the morning when the markets opened and were in a somewhat discontinuous state—certainly moving—it was entirely credible that the core of the system was rock-solid and not amplifying, and it had overwhelming force behind it. I guess people can debate it and can certainly debate the orders of magnitude. Nobody can debate that the direction of the assessment was right in terms of the risks and that the steps that were taken to mitigate those risks helped to reduce the severity of that risk.

Mr Jacob Rees-Mogg: Hence your comment about making the weather.

***Dr Mark Carney*:** In that case, it is making the weather.

Q149 **Mr Jacob Rees-Mogg:** I will make a final point on the forecasts. Obviously, forecasts tie into stability. The forecasts were inaccurate, and not just by the Bank but by everybody else. When interviewed by Bronwen Maddox, Mr Haldane said this was fair cop and he stuck his hands up. Is that your position, or do you think he went too far?

***Dr Mark Carney*:** Speaking as the MPC, because this is an MPC, not FPC, question, I would say two things. First, the MPC back in August was at the upper end of consensus in terms of its forecasting. It had not the most positive forecast, but a more positive forecast than others at that time. It took action to help reinforce the adjustment, consistent with its remit. In November, it upgraded its forecast. I would say—I will say this very lightly—that recent data would be consistent with some further upgrade of the forecast, but that process has not yet started and it is an MPC forecast. However, directionally that is right.

This is about the near-term strength of the economy, which is absolutely welcome. We have expected as of now, which we will see with the new forecast, that there will be some slowing of the economy this year. That is related to some of the effects from Brexit.

Chair: I do not want to go into too much detail.

***Dr Mark Carney*:** The point is that, in my opinion—and I believe it is Mr Haldane's opinion, having spoken with him about what he was trying to say and how it was interpreted—missing the financial crisis is a big deal. A couple of good quarters is nice to have. It is a different order of magnitude.

Chair: I would be very worried if the forecasts were right, after all. They are always wrong.

***Dr Mark Carney*:** We would have nothing to talk about.

Chair: You would obviously have a clairvoyant or something at the Bank, if it turned out they were right.

Q150 **John Mann:** A silence would be a perfectly acceptable answer to this question, but can we just conclude that none of you are the slightest bit surprised at the healthy state of the economy today compared to your thinking in May?

***Martin Taylor*:** I am a bit surprised.

***Professor Anil Kashyap*:** I am too.

John Mann: It is better than you expected.

***Martin Taylor*:** It is better than I expected. At the risk of lengthening the forecasting debate, which is an important one, it seems to me that the conclusions that have been drawn from the undoubted misforecasting are mostly wrong. We have read that the forecasters are experts and therefore hopeless; that is one conclusion that has been drawn. That they are politically biased is another conclusion that has been drawn. The third is that there has been some miracle in the economy. None of these have happened. It is much more prosaic.

On the forecasting itself, I defer to the professionals on my right. Economic models are based on what has happened in the past. There is no precedent for a major country deciding to tear up all its trade deals and go off into a new world that does not have exact contours. It seems to me that any forecaster looking at such a possibility has to suppose that there will be a confidence effect.

The mistake that seems to have been made in the forecasting has been greatly to overestimate the size of that confidence effect on the consumer. The big thing that has happened in the British economy since Brexit is that people have got on with their lives, thank goodness. Increasingly, they have got on with their lives thanks to consumer credit, which is another issue that you may wish to discuss later. That is what has happened, and I do not think that any of the sinister and fancy explanations are necessary. It is all rather prosaic.

Q151 **John Mann:** You have made a massive political comment, because it may be that there is not an attempt to tear up all the trade agreements. Dr Carney, you will recall that in May, when you were getting a lot of haranguing—it is probably the right word—from my colleague Jacob and others, I leapt valiantly to your defence and suggested that the results for Brexit, for better or for worse, will be seen in the long term, not the short term. You nodded at the time, Mr Taylor, I recall but, Governor, you were not that keen on that idea. You thought the short term was a problem. Why?

***Dr Mark Carney*:** We can go back to the transcript. I would be surprised if I disagreed with you about the long-term effects. We saw a risk of a material slowdown in growth and a notable increase in inflation. That was the view of the MPC. We saw a risk to financial stability as the FPC. We took action on the latter. Of course, the MPC did not take action on the former because it had to see it actually transpire. We are going to get the notable increase in inflation—we are starting to get it. The slowdown in growth has not yet transpired. Relative to then, that is a surprise.

Again, this is about orders of magnitude. Post-Brexit and post the action of the FPC—including, as Mr Taylor referenced, the loosening of the countercyclical buffer—we forecast modest growth, but we forecast growth, at a time when others were forecasting a contraction. The economy is growing more strongly and so, relative to that, that is upside news. You can put it as a surprise. That is positive. The global economy is growing more rapidly than we thought at the time as well.

Q152 **John Mann:** Would it help stability if the Government were to bring in a simple Bill in the very near future that brought all EU law into UK law? In other words, if the Government want to start changing this bit of EU legislation or that bit, they put that off until after the next general election, should they will it, and they simply bring in all EU law and say that all EU law would be UK law. For example, that is environmental standards, health and safety and employment law. Would that kind of stability assist the economy?

***Dr Mark Carney*:** Let me make two points. First, the general uncertainty point—just to pick up, while I can, something Mr Taylor said about the uncertainty effect on the consumer—is a fair point. We have now adjusted this in our forecast. Secondly, points of high uncertainty are normally associated with tighter financial conditions, and financial conditions did not tighten. In fact, they loosened post the Bank of England actions and because we got through the night. We only had the uncertainty effect, as opposed to the financial condition reinforcement of it. It is a point some colleagues of mine—Michael Saunders and Kristin Forbes—have made, and it is right. That has also helped the environment.

One of the points we have been making is that we do not, in the near term, see a material tightening of financial conditions on the horizon because of whatever decisions are taken in the relatively near term, at least related to the issues we are speaking about. That is a judgment, and you can hold us to account for it; in fact, I will make it my own judgment as opposed to ascribing it to colleagues. There are issues around the medium and longer term, which we have discussed. That is the context for answering your question. Can I reinterpret it?

John Mann: I am just waiting for the answer to the question.

***Dr Mark Carney*:** Yes, but if I understand the question you are saying: take the great repeal Bill and make it legislation this spring, as opposed to making it legislation after the—

John Mann: I am, but also the Government could choose simply to say, with a very small Bill, that all EU law is UK law. There is a lot of tidying up over the next two years, or however long we remain in, on some of the institutions, but, in terms of the principles, that gives absolute certainty on employment law, health and safety law and environmental standards overnight.

***Dr Mark Carney*:** Forgive my apparent ignorance, which I am about to expose, but my understanding is that the Government are committed to a great repeal Bill that will effectively do that in the future. As I sit here today, one thing I do not pick up from CEO conversations is a concern about a change in the regulations that apply here in the UK in the foreseeable future, because, as long as we are a member of the EU, those rules apply. Once the great repeal Bill comes in a cut and paste comes down, at least initially; the same rules apply; and then Parliament does its job and there are various changes down the road.

That uncertainty is not an uncertainty that I hear. The uncertainty I hear, which varies by business and sector, is about access to Europe, and the act of repealing and doing legislation such as you say, at least in the financial services sector, would be interesting, but it would not answer the access questions that are present, which you discussed yesterday with the private sector.

Q153 **John Mann:** You made some interesting comments on inequality.

***Dr Mark Carney*:** Not just now, but yes.

John Mann: Recently.

***Dr Mark Carney*:** About the consequence of monetary policy for inequality, yes, which apparently has been to reduce it since QE was introduced.

John Mann: But also about the position of people in different parts of society, and whether the economy is working for them.

***Dr Mark Carney*:** Could you provide me with a quote, because I do not recognise that phrase?

John Mann: You were quoted over the new year as making such commentary.

***Dr Mark Carney*:** Again, I am trying to think. I believe this is my first public appearance since the new year.

John Mann: Do you regard inequality in this country as a problem?

***Dr Mark Carney*:** From a monetary policy perspective, let me make a couple of points. First, as detailed in a speech I made in Liverpool, and colleagues have made similar points in different ways, the level of inequality in this country, both wealth and income inequality, measured broadly by quintiles, has gone down over the course of the last decade. At the very upper end, the top 1%, there have been increases in inequality, but broadly it has gone down. The level of inequality has gone up across generations quite markedly, particularly in wealth but also in income, with some consequences for how the economy functions.

If I may take this opportunity, even though it explicitly is not an objective of monetary policy, it happens to be the case that, since interest rates fell to their lowest levels and QE was introduced, wealth and income have risen across all quintiles in this economy, as well as moving to record employment levels. In fact, I will not say it has caused it, but it has been associated with declines in inequality. Is inequality an issue in this country? I will not make the general point; I will make the specific point in terms of the functioning of the economy and how it pertains to monetary and financial stability.

One of the issues is that, in general globally—or, if I can qualify that, within advanced economies, because you can cut this in different ways—increases in inequality have some potential to reduce the equilibrium interest rate, such as one can estimate it. Directionally, they would reduce the equilibrium interest rate, which pushes down on the level of interest rates that help the economy to clear, to draw it back to financial stability. That means running the economy for longer periods of time with very low interest rates, which, everything else being equal, and it never is, I would argue runs a greater risk for financial stability because of a series of asset price adjustments.

Q154 **John Mann:** I have one final question, a follow-up to that, because I was taught that economics was the study of people's behaviour more than anything else. People's behaviour is conditioned by their employment status and expectations. If you get up for work on a Monday morning, you have a fixed salary and you own a home, that is rather different from if you do not know how many hours you will be working, or whether you will be working that day, and therefore how much money you will have that week. Is that a key consideration these days in the way the UK economy has started to shift, in terms of how people behave, be it politically with things like referendums, but also economically?

***Dr Mark Carney*:** I am not sure I am qualified to answer that. I would only observe that while inequality has not risen in this country, broadly speaking—again, I am talking about quintiles—in the last decade, what is true is that growth, despite recent statistics and performance over particularly the last three and a half years, has been remarkably weak. The general level of income growth has been weak, and perhaps some of the things you are ascribing are a result of that low overall pace of growth, which is a product, as you know, of very anaemic productivity performance in this economy.

Q155 **Chair:** Before we leave financial stability on a global and European level and get into stress tests and much more UK-related issues, can I ask you this, Professor Kashyap? There is very little in this Financial Stability Report about the financial stability consequences of the election of Donald Trump. He seems to be—or at least we are told by others that he is—a risk to most forms of stability. What about financial stability.?

Professor Anil Kashyap: It was an hour and 10 minutes before anybody mentioned Trump. It is the biggest group I have been in where you could go so long without his name coming up. The committee has not discussed this at any length, so I will speak personally. The first place his presence will be felt will probably be filling the vice-chair of supervision for the Federal Reserve. That position has been unfilled since it was created by the Dodd–Frank Act.

Right now, Mr Tarullo has been doing that job, but he has never been confirmed. I do not know anything inside; I am not affiliated with the transition team in any way. However, there are many rumours and a lot of discussion that he will appoint someone to that position. If so, that could change the way the Federal Reserve negotiates all over financial stability issues. That would be something to be watched.

Q156 **Chair:** He has said, or hinted, that he will get rid of Dodd-Frank. Does that matter, if he sticks to Basel III?

Professor Anil Kashyap: Goodness. Two things: first of all, you probably know this, but just to remind you, it still takes 60 votes in the Senate to do many things. He can do anything that is attached to a tax and spending bill with 51 votes. A lot of the things you might want to repeal in Dodd-Frank will not be plausibly attached to tax and spending bills. They can defund certain things, but in terms of rolling back, let us say, the resolution and Title II stuff, they cannot do it with just 50 votes. We will have to see where their priorities are and so on. The reason I answered first about the personnel changes is that he can do that immediately, and he will do that throughout the financial regulatory community.

Chair: What is the answer to my first question? Is he a risk to global financial stability? Has the risk gone up, gone down or stayed the same level?

Professor Anil Kashyap: It has stayed the same for now. These international agreements are broad; they involve lots of parties. The number of things that the US can do unilaterally, which he can trigger, is limited in the short run. Over the medium term, things could change, but I do not think there has been an appreciable shift just because of his election.

Q157 **Chair:** Governor, he seems to be operating by Twitter account. Do you have somebody monitoring what he does at two o'clock in the morning, in case he decides to say something that might move markets?

Dr Mark Carney: Yes is the short answer. We do not monitor him, per se.

Chair: I am literally thinking about his Twitter account, and some of the things that appear on his Twitter account.

Dr Mark Carney: We monitor your Twitter account, Chair. He is the President-elect and will shortly be President, so anything he says through any media is instantaneously reported and felt by markets. His press conference this afternoon, I am sure, will be closely followed. We follow it, but, as regulators, we look forward to working with the new suite of officials who will be appointed by the new Administration.

Chair: I have drawn up a list here, but I will not go through them. It is quite an interesting group of characters.

Q158 **Kit Malthouse:** Good afternoon. Can I just ask some questions about the stress tests themselves? My reading was that during the period of the stress test the banks experienced £44 billion of crystallised losses. What is the impact of the application of IFRS on banks' balance sheets?

Dr Mark Carney: IFRS 9, I presume. That has not yet come into effect, so we did not layer IFRS 9 into the stress test.

Alex Brazier: It will be in 2018.

Q159 **Kit Malthouse:** But will the general IFRS principles about mark to market not have an impact?

Dr Mark Carney: The banks report under IFRS, so yes.

Q160 **Kit Malthouse:** Does this mean that asset books are marked to market during that period?

Dr Mark Carney: As you know, it depends on the type of asset you have. If it is held to maturity, you do not mark to market. If it is trading, then you do mark to market, which is why for the latter we had a congruent or market-consistent shock with the stress test, which it is fair to say is something we were doing comprehensively for the first time. There is quite a bit of downdraft in financial markets, as you would expect, associated with the stress test.

You rightly quote the £44 billion number in the first two years. That is the net loss of the institutions. They crystallised, over that period, about £106 billion of losses on their portfolios, and that is £60 billion or so of standard banking credit impairments, and a ballpark £20 billion of losses on market activities—their trading books. Then they pay out an additional £30 billion of misconduct penalties. To be clear, that is not a prediction forecast, but a stressed misconduct 90% confidence interval, so they pay out that on misconduct. They give up some income on net interest margin because of spread compression.

The other thing that then happens, which is important for where their capital ratios go, is not an accounting thing but a regulatory dynamic. What happens when you go into a worse credit environment within the system is that the risk weights on your assets should change. Even though the guy does not default on the loan, everything has become riskier because the economy is in recession and unemployment has gone up. It is detailed in here, but from memory I think it is a 20% increase in average risk weights for the institutions. They get hit; there are impairments; the market goes down; they pay out a bunch of conduct penalties here in the UK and abroad; and, as it should, the riskiness of their assets goes up. It is all those things hitting at once that knocks them.

Q161 **Kit Malthouse:** What would the impact of IFRS 9 be?

***Alex Brazier*:** The honest answer is that we do not know yet. This year, alongside the stress test, which will be done under current accounting standards again, we will conduct a parallel exercise. We are going to give firms various scenarios, because, as you know, IFRS 9 requires them to make assumptions about what will happen in the future as well. We will give them a range of scenarios, and ask them to tell us what the stress test result would be at each point in time, given those scenarios. We will publish details of that, by the way, alongside this year's stress test result. That will help us to design the 2018 stress test in a way that is sensible and prudent and adapts to the new accounting standards. We will need to give them more information than we currently do, in order for them to complete the test on that basis.

Kit Malthouse: Would it be fair to say that, in effect, IFRS has made things worse: that, under the old UK GAAP, bank balance sheets would have been more resilient, because things would have been effectively held at book value?

***Dr Mark Carney*:** I am not sure I would come to that meta-conclusion. It has been 25 years since I have operated under old UK GAAP, so I am hesitating to make the actual comparison. On balance, the international accounting standards provide a fairly accurate picture. We make adjustments to the accounting numbers for regulatory purposes, the most important of which are around regulatory capital. We reduce regulatory capital by making some adjustments. We can go into that if you wish. I would not say that it has necessarily made it worse, but I hedge that a bit because I am comparing to something that I just do not use.

***Martin Taylor*:** You have made a very good point, and we certainly have to be careful that we do not allow accounting rinky-dinks to pollute the stress tests. I take some comfort from the fact that, because the stress test is itself an artificial exercise, it can look through these things. For example, a real-life bank with a real-life large credit that is in trouble can have arguments with its auditors about how much it writes it down by; in the stress test, this just does not arise. What you are saying is that your book in a certain territory is in some way compromised, so write it down.

Q162 **Kit Malthouse:** There is a theory, to which I have to say I am starting to subscribe, that IFRS came in at just the right or wrong time to exacerbate the crash. You had whole boardrooms that had carried on under UK GAAP, who were not aware of what they could or could not do under IFRS, and were basically told they had to write the whole lot off, and then it became a systematic problem. You do not think it is any more. Let us put it this way: there is enough skill in bank boardrooms to have those arguments, to the extent that the position you have now would be mitigated to some extent.

***Dr Mark Carney*:** Yes. We should not be approving chairs, CEOs and heads of risk committees, which we do, if they do not know how to operate under the accounting standards.

Kit Malthouse: I bet if you sat most of them down and asked them, quite a lot of those chaps in their 50s and 60s would—

***Dr Mark Carney*:** We do. They go through a fit and proper—

Q163 **Chair:** How would the FPC do?

***Dr Mark Carney*:** On which aspect?

John Mann: On an IFRS test.

***Professor Anil Kashyap*:** Do we get to study?

Q164 **Kit Malthouse:** But we will see the effects next year of IFRS 9.

***Dr Mark Carney*:** In 2018, yes. The general directional will be that IFRS 9 will be akin to some increase in capital requirements, net.

***Alex Brazier*:** We should remember that current accounting and regulatory standards include an adjustment for expected loss, albeit on a 12-month basis. The net of those two is not necessarily clear yet.

Q165 **Kit Malthouse:** There will be two steps forward and one step back. I wanted to also ask about something you said in mitigation. One of the things the banks do is to trigger their CoCo bonds. Over the last year, there has been quite a lot of flak in the air about these instruments. Should we be worried? Are they embedding systematic risk between insurance companies and banks? Again, with the application of IFRS, the moment there is a problem, all the CoCo bonds go to zero and the whole thing starts to fall apart.

Chair: Martin Taylor has thought a lot about this.

***Martin Taylor*:** They turn to equity, you mean.

Kit Malthouse: Yes.

***Martin Taylor*:** There are some classes that one would write off, and they are not the ones I particularly like. The excitement in the market last year about CoCos was very salutary, because it reminded people that these are highly leveraged instruments. Certainly, as an FPC member, I have been happy to see that the stress test caused some CoCo triggering, just to remind people that this is for real.

Q166 **Kit Malthouse:** There is huge demand for them, isn't there?

***Martin Taylor*:** There is huge demand, yes. In practice, the management of a bank would be extraordinarily unwilling to see a CoCo trigger, so it would only trigger if something went very badly wrong, and the management would not survive, even if the bank did.

***Dr Mark Carney*:** May I just supplement that with two things? First, it is a good thing, although it was not designed for this, that AT1 triggered in this stress. It is a reminder that there are scenarios where these things would trigger. Secondly, some of the issues that happened last year, and you are right to draw attention to them, in institutions outside the UK related, in part, to a lack of clarity or a great confusion about the rules around AT1, when they would trigger and when they would not. It is not just the 7% threshold; there is something called the maximum distributable amount, akin to your ability to pay a dividend.

The rules around those in Europe were reinterpreted, in an adverse way for the holders of the AT1, in a way that surprised them. Therefore there was confusion at the same time as there was stress in the system. One should recognise that. We want there to be absolute clarity and transparency that, if you dip below that regulatory systemic minimum of 7%, these will trigger.

Thirdly, I would reinforce what Martin Taylor just said. One of the advantages of these instruments is that they force management to think hard about whether they will let that happen. In other words, will they sell off assets or raise equity? Is it better to take the equity? They have a pre-packaged equity injection in the AT1. It is only sold to wholesale. It is not sold to retail; that is another very important thing. The FCA has been very clear about that. They have pre–packaged equity, but it may be better to go out and get equity in another form, disposing of assets or issuing equity itself.

That incentive concentrates the mind of those people in the boardroom. We saw this in the run-up to the 2007-08 crisis, when the really good institutions issued equity early, when people thought they should not, and the less good ones gambled for redemption. The AT1 forces you to think about what you are going to do, earlier than that redemption point.

Q167 **Kit Malthouse:** The nature of these instruments, and that magic expression, means you are dealing with a very volatile market. Whether the management decides to trigger this thing or not, the value will plunge once the bank starts to get—

***Dr Mark Carney*:** They do not have the option to trigger it if the losses move them through the trigger point, as in this case for three of the institutions. It triggers automatically. The uncertainty is about what the losses are, when they would crystallise and whether management would do something else in order to prevent that. In other words, are they going to sell off an asset or raise equity another way? There will be some volatility around those. They will be dynamically hedged by some of the institutions that hold them, but in the end whoever holds it when it triggers is going to be an equity holder of the bank, as opposed to a debt holder.

Q168 **Kit Malthouse:** But at significantly lower value. The market will mark it down. The situation is presumably that a bank gets into trouble, the value of the bond starts to fall, it gets to a situation where it is triggered, and they become equity holders. At that point, you are at a market value below where it was before, because it has fallen to a bank that you know is in trouble, and it is triggered to effectively save the bank, but nobody has any guarantee. If you are an insurance company, that obviously has an impact on you and your regulatory capital. If that bank is then also holding insurance company instruments, then it becomes a circular cycle of destruction.

***Dr Mark Carney*:** I would heavily discount the last one in terms of orders of magnitude. By the way, on that circle of destruction, which I think is the term you used, that is why banks cannot hold each other's CoCos, which is a rule in AT1. The holders of these instruments—I will defer to Martin—are handsomely compensated for the risk.

Kit Malthouse: That is why there is such huge demand.

Chair: We need to move on in a moment, unless Martin Taylor would like to add something.

***Martin Taylor*:** I have no more to add.

Q169 **Kit Malthouse:** I have one more question on the stress test. Last year, Governor, you announced five research projects. You talked quite a lot about the fifth one, which was the green, environmental climate change one, but the first one was quite interesting. It was about the interaction between micro, macro and monetary policy. In particular, I was struck by one sentence in there, and I wondered if you reached any conclusions on it.

One of the questions you were asking was, "When might monetary, macro and microprudential actions jar and how should each of these policies respond in a downturn? How should bank stress tests and macro-financial indicators integrate to deliver capital requirements which meet both micro and macroprudential objectives? And what lessons can be learned on these topics from pre-crisis experience?" One thing that is coming out of the stress test is that it will obviously make it more difficult for banks to lend. It will presumably reduce lending and liquidity in the market. The implication from this research paper is that maybe the right balance is not being struck, given the tools that you have.

***Dr Mark Carney*:** The question is very on point. The FPC, among the three main committees of the Bank, is primus inter pares on this question. One of the lenses through which we look at the stress test results—and it is only one input, but it is an important input—is whether or not the system can take a shock and will continue to lend to the real economy for the demand that is there. That is one of the key judgments we make in terms of the capital adequacy of the institutions. The judgment is in here and it has detailed the actual lending path and demand. It is an estimate of what the demand would be in years 2, 3, 4 and 5 after you have this big shock, but it is still growth in lending.

We are looking at the absolute amount of the capital, the way we have designed the stack and whether or not the banks have that incentive. It is relevant to judgments we would make around, for example, a countercyclical capital buffer, such as "When do we want to be building that up to build resilience for potential future shocks?" or "When do we want to release it to ensure banks are willing to lend?"

I will finish here, but Mr Taylor referenced this early on: one of the things we did back in July was to pull off the countercyclical buffer, to reduce it to zero, so that there would be no doubt about the access to capital. I know we look back now and say, "Obviously, there is consumer credit", but it was one of the ways to send a very clear message to businesses and households in the UK, and to the banks themselves that they had the capacity to lend.

My last point is that, when we look at the results of this stress test, we feel justified in doing that, because even without that CCyB being in place, they had enough capital in order to withstand this stress. That is part of the obligation.

Q170 **Mr Steve Baker:** Good afternoon. In the stress tests, three out of seven banks ran into problems of some sort. Mr Taylor, after all the regulatory change that has happened, were you surprised that they did not all pass?

***Martin Taylor*:** It was a hell of a stress.

Q171 **Mr Steve Baker:** I will come to Mr Brazier in a moment, but when you design these stress tests, are you saying that every year we should expect to see at least one bank fail, because otherwise we should say the stress was not harsh enough?

***Martin Taylor*:** People say that anyway, whatever we do, so we do not consider that particular object. We try to set stress that is severe and plausible, as the Governor said earlier, and we put the system through the wringer. When I said it was a hell of a stress, it was a hell of a stress in two ways. First of all, the combined size of the shock was larger than we have had in previous years; secondly, we have raised the hurdles for banks. The banks are progressing, if you recall, to the 2019 Basel end point, and indeed with MREL beyond that. The hurdle they have to pass is higher this year than it was in previous years, so I am not particularly surprised that we had three that did not quite make it. Only one of those was serious.

Q172 **Mr Steve Baker:** Professor Kashyap, I do not know if you happened to see ITV news last night, but Sir John Vickers was on, and ITV report that he said, nine years after the financial crisis, that progress to ensure the banking system is more resilient has been "really disappointing". You clearly, I think from your expression, would disagree with him and agree with Mr Taylor. What would be your response to Sir John?

***Professor Anil Kashyap*:** I was on an aeroplane, so I did not see him. He is a friend. I would make three points. First, it is clear that we have raised the amount of capital in the system immensely. Secondly, stress tests did not exist before the crisis, and they are probably one of the most stability-enhancing things that have come into the regulatory toolkit. As a result of the deliberations as to what was happening with the stress tests, ultimately, some of these banks took action and made these decisions to improve their capital positions. That, again, is something that could never have happened before the crisis—that you would have these conversations between supervisors and the banks, forcing them to do that.

Does that mean that they cannot do more? No. The US has been at this for some time now, and you saw several of the big banks in the US fail the stress tests repeatedly. There were management changes at some of them, because they could not figure out how to do it. I expect the same thing will happen here. The public shaming and the anger of the shareholders and everybody else in the institution around not passing will grow over time. I would hope that in a couple more years it would be exceptional for somebody to fail, but that takes a little bit of time. We do not want to overlook the progress we have made.

Q173 **Mr Steve Baker:** Mr Brazier, this is squarely your bailiwick. Sir John said the test should be "more rigorous, more robust". He has raised the issue of book or accounting value versus market value, very much related to that point about IFRS, and he has said that in future a market–based test should be run in tandem, for richer analysis. Is this a proposal you have considered, or one which you might consider?

***Alex Brazier*:** Anything that John Vickers suggests, particularly on the ITV evening news, I am very keen to consider. As you know from yesterday's report, he wrote to the Government some months ago, raising these issues and the precise suggestion, and we considered it very carefully. I agree with John on a very, very great many things, but this is not one of them. Let me tell you why.

On the issue of the rigour and robustness of the stress tests overall, this year's test, as Mr Malthouse alluded to, was one in which the scenario was at least as tough as the financial crisis. The losses that resulted for this group of banks were five times what they experienced in the financial crisis. The losses were such, in terms of the decline of their capital ratio, that they would have wiped out the entire capital base of the British banking system in 2007. That is how severe the test was. Yet, after that, they were left with a capital base that was more than twice that with which they went into the financial crisis. We are talking serious, big numbers here, and a seriously rigorous test.

On the rather narrower point of using market-based measures of equity, it is worthy of consideration, but let me tell you why I come down on the side of not using it. Put aside the fact that the market value of banks' equity is currently higher than the regulatory measure that we use. For the major banks, the market value of their shareholders' equity is £270 billion. In the stress test, we assume they have £230 billion-worth of regulatory capital, so it actually points to a slightly stronger banking system than the one we use in the stress test. I do not want to use that, because it includes things that I do not want to include in regulatory capital.

Put aside, as well, the fact that, if you had done this before the crisis, you would have been led completely astray, because banks were being valued extremely highly by a market that was effectively mispricing risk across the board. You would have been led to the conclusion that the British banking system was remarkably resilient, and, as forecasting errors go, that would have been quite a good one.

Putting those things aside, what really matters is that we include in the stress test the things that the market price is reflecting, to the extent that we believe them. Right now, those market prices are typically reflecting a fairly weak earnings outlook, consistent with recent past performance, and the prospect of quite significant conduct redress fines. Those things are incorporated in the stress test. We should challenge ourselves, and we do, to say: "Given what we are incorporating in the stress test, is there anything else in the market valuation that we cannot explain with these results and that we should include?" The answer we came to after rigorous analysis this year, last year, and the year before is no.

The underlying argument is that the UK banks are sitting on currently unrealised credit losses. We should entertain that possibility, and we look very carefully, as we do in the report, at market measures of their loan portfolios, at their non-performing loan rates relative to their provisions and capital, and none of those indicators give us cause for concern about that particular point. We are confident that the things in the stress test are consistent with what the market is pricing in.

Q174 **Mr Steve Baker:** I want to ask you a couple of questions, Governor, in a moment, if you will just bear with me. Mr Brazier, before I come to the Governor, can you be absolutely clear? Sir John's arguments were taken, and ITV had my friend and colleague Kevin Dowd run some numbers, and only Lloyds passed the tests. Now, if it were the case that only Lloyds would pass if one took into account Sir John's recommendation on valuations, then we would have a very serious capital problem, wouldn't we? Can you just confirm that you are not concerned that the only robust bank is Lloyds?

***Alex Brazier*:** I do not share that conclusion. I have had someone rerun the numbers, and, to be honest, I cannot replicate those numbers using the data of the bank valuations. Even so, the general point still applies, which is whether it is the right thing to do.

***Dr Mark Carney*:** I would just make the point that there is a double count here, as Mr Brazier just said. Price to book ratio shows the market cap versus the book value of equity. We do not use the book value of equity. We take the book value of equity, and then we reduce it for things that will not be there when times are tough. That is the lesson of 2008: no deferred tax assets, because if you are a lousy bank, those are not real assets; no goodwill, because you have no intangible value; no value to investments in other financial institutions, because, if times are tough, those are probably worth nothing as well.

The fact is that the book value is reduced substantially, for regulatory capital purposes. What has happened here is that they have taken that lower number and multiplied it by the ratio, so they have double counted it. I am sorry; they could have come and asked us how to do the calculation and we would have helped them with it, but they did not. They have just double counted on it.

That raises an important point, which is what the market value, whether it is a CDS spread or price to book value, tells you. As typical glass-half-empty, prudent central bankers, we care a lot more about when it is below book value. What is it telling you and why? We look at the asset quality. We run £100 billion-worth of impairments through these guys in two years, which is how you stress the value of the things. We did that, and let me underscore that you end up with capital that is twice what they had going into the financial crisis, after having had five times the losses. There is a point at which somebody says, "Do you have too much capital in the system?" as opposed to "Do you have enough?"

To take the market point and the return point seriously, we do two things. One is to say, "In our stress test baseline, before the world goes poorly, what is the path of profits? Is it at all consistent with what the market is valuing?" You do a dividend discount model and look at the various costs of equities. We end up with a price to book of about 0.75, which is roughly where the market is right now. Their baseline is weak profitability.

The second thing, which is a bigger point, is that as a committee, when we sat down with our colleagues just before Anil joined, we said, "This is an issue. The longer-term profitability outlook for the banking system is a prudential issue, and we should run a stress on: what if we are in this low-for-long interest rate environment, this squeezed net interest margin, low loan activity world for a long period of time? Instead of just looking at a couple of years, let us look at seven years, so it has time to really accrete for capital and resilience." We are doing a second stress test this year, in 2017, a so-called "exploratory scenario" that looks at exactly that issue.

The point Professor Vickers, Professor Dowd and others are raising around looking at the market and the values, and what these tell you as regulators, is not that for us there is some big asset quality hole, but that there are issues with returns. Shareholders care about them in the short term, as they should, and we care about them in the medium term because a banking system that has low profitability ultimately loses resilience over time. That is what we are trying to dig into.

***Alex Brazier*:** Weak returns in the stress test also toughen the test for the banks, because they have less capacity to earn their way through the stress itself. They actually take a capital hit, rather than accrete earnings.

Mr Steve Baker: The Bank has obviously been good enough to take Professor Dowd's concerns very seriously, and I should admit that Sir John's concerns are clearly in another category. You have said that you have taken them extremely seriously. What strikes me, Governor, is that Sir John, having written to you, felt it was necessary to appear on ITV News the night before this hearing. I do not want to criticise him, but in political terms that is quite an aggressive thing to do to the Bank of England. Why do you think he is so concerned about this issue that he would put you in a position of facing this questioning, him having been on the ITV News the night before? Why would he do that to you?

***Dr Mark Carney*:** I am qualified to speak to the numbers and to the resilience of the system. We have looked at that. I will not speculate on people's motivations. I will underscore that it is very welcome that this Committee, but also academics, financial analysts and members of the public, challenge these results. This is the point, to ask these questions, so I welcome that. It is not ideal to get the thing the night before, and it is not ideal to not sit down, roll up your sleeves and go through the calculations, so we are happy to do that.

The general point is absolutely merited, but, in terms of the specifics, I am afraid we will not loosen our hurdle by using market values that are above regulatory capital, because that is not in the interests of the British people.

***Professor Anil Kashyap*:** Let me make one point. It does not have to be the case that, when you go through this, you can rationalise the price to book ratio and that you can reconcile that with a weak outlook for future profitability. We mention in the FSR, and the record of what we pointed out, that the answer would probably look different if you ran the Italian banks through this same kind of exercise. The fact that there are so many non-performing loans is a material reason why the price to book ratio looks low. It is not pre-wired into the stress test at all.

***Dr Mark Carney*:** That is why you have CDS spreads of some subordinated CDSs. Some Italian banks trade at 600 over, and they trade in the low 100s for UK banks. It is more than one market.

Q175 **Mr Steve Baker:** The final point, if I may, is that Sir John is evidently extremely concerned about this issue. He disagrees with you, as you have identified. You have not been able to reproduce their findings, and, Governor, you just said a moment ago that you would be willing to roll up your sleeves and go through the numbers. Can we take this as a willingness to extend an invitation to both Sir John and Kevin Dowd to roll up sleeves and go through the numbers with Mr Brazier, and see if you can reproduce their results and explain why you differ?

***Dr Mark Carney*:** To be absolutely clear, I wrote back to Sir John after receiving this letter. I think I got his letter in early December and I wrote back just before the holidays, so I am happy to put the substance of that into the public domain. We are happy, in terms of specific calculations, to go through it. Their general point, which is to look at market indicators, is absolutely right. The specific point that we have somehow missed something here is not.

Q176 **Mr Steve Baker:** I can see us coming back to this subject months from now, unless you actually sit down with them and go through the detail. Mr Brazier is nodding.

***Dr Mark Carney*:** The meta point is that this Committee is doing a review of capital, resolution—all these issues and many more. I shall be examining that one.

Chair: They are all related. We are very much on the case here, on this Committee. In fact, we will address bank capital issues now.

Q177 **George Kerevan:** The countercyclical buffer you have kept at zero. As I understand it, you have explained that in terms of ensuring there are no constraints on credit, given the uncertainties that emerge post-Brexit. Can you clarify this for me? Is the decision to hold the countercyclical buffer at zero intended as a fiscal boost to the economy to offset uncertainty? Is it to, in part, ensure the resilience of the banking system and its ability to function, or is it both?

***Dr Mark Carney*:** The approach we take as the FPC on the countercyclical buffer is to site it relative to the risk environment in the economy. The judgment in the summer was taken at a time of higher uncertainty when we were in between Governments and the short-term confidence indicators, which subsequently bounced back, had fallen quite sharply. We were at the end of the stress testing process, so we were pretty well informed about our view of the resilience of the system. We had a view that we could responsibly lower the countercyclical buffer to zero, to ensure that there was no question about lending capacity for people who had a good idea for a business or could qualify for a mortgage, and that that continued seamlessly.

Because this has a capital planning element for the banks, we gave guidance then that we expected it to remain at zero for about a year. Now, we revisit it, as we are statutorily obligated to do, on a quarterly basis. We are statutorily obligated to look at it with reference to the credit gap, which I can assure you is the one indicator, in all of our lifetimes, that will not flash red in time for us to adjust it. We can go into that at some point. We have to look at it each time, and we looked at it most recently in November. We reconfirmed that we expect it to remain at zero until the summer.

Now, if the economy continues to perform roughly as it has, if credit demand and the risk environment continue to remain roughly as they have been, there will be a case, certainly, to signal the rebuilding of that countercyclical buffer. The FPC has taken this as a policy view that, in normal states of the economy, which covers a wide range of states, we would like to see the countercyclical buffer at around 1%, and we want to give institutions time to build that up if that is the case. We will keep looking at it quarterly, and we will see how things evolve, but, if the risk environment has remained or improved, it is quite possible that we would adjust it.

Q178 **George Kerevan:** I do not think that quite answered the question. Maybe it is the wrong question. It seems to me there could be a confusion, in the minds of the market, among politicians, who are quite naive, or among the public that you are reducing the countercyclical buffer to boost the economy. If that perception holds, then there might be occasions in the future when you are reluctant to raise it when it is necessary for bank stability, simply because you have run into a situation where it could be perceived as slowing the economy.

***Dr Mark Carney*:** Our view is that we want to move early on the countercyclical buffer, in part for reasons that you are indicating. You need to give institutions significant time to build, and we do want to have it at that resting level. The best time to build it is during periods where, as I say, the economy is roughly in a normal risk environment. That is not the adjective, is it? *[Interruption.]* Thank you—a standard risk environment. It is possible that, if that risk environment persists for some time, and it were warranted, we would go above that 1%. We say "around 1%" but it is certainly possible to go higher.

I can only speak for the committee while I have been on it, but I have no concerns about the resolution of this committee to build that. It is part and parcel of the framework, so you can expect us both to release it when it is necessary, but absolutely to rebuild it as soon as is practicable afterwards.

Q179 **George Kerevan:** Does the "standard risk environment"—perhaps Mr Brazier could help—mean that we will be outside the standard risk environment during the Brexit negotiations and discussions over the transition period?

***Dr Mark Carney*:** That is not necessarily the case. Certainly, in the immediate aftermath of the referendum, a series of confidence and risk indicators, including supervisory intelligence, since we are supervisors of all these institutions, suggested a drawing in of risk appetite at those institutions, and so we leant against the wind on that. I do not want to prejudge, but institutions are, at least with respect to lending into the UK economy, and certainly into the UK household sector, operating in a more standard way at the moment.

While there are uncertainties around the ultimate end state, we will see how it evolves with the triggering of Article 50 and the various events that could happen over the course of the next few months. The most likely time that we have signalled we will seriously reconsider this is the summer of this year, but, informed by how the economy and risk perform, the judgment may be that it is appropriate to raise it.

Q180 **George Kerevan:** Without being rude to you at all, can I just consult the other members of the committee on what impact they think Brexit negotiations, however long they run before they come to fruition, will have on the standard risk assessment?

***Alex Brazier*:** I think of the countercyclical buffer as having three gears. There is reverse, neutral and drive. Neutral is that standard risk environment: risks are not about to crystallise, nor are they building. That is when we expect to be in the region of 1%. We are at zero, or in reverse gear, currently because we think there is a reasonable prospect that some of the risks we have identified could crystallise, and we talk about those in some length in the report.

To raise it back from that zero towards 1%, we would need to come to the view that the prospect of risk crystallising had diminished materially. That will be a judgment that we take, as the Governor says, quarter by quarter. Behind your question is a suggestion that that period could last quite a long time. It could. However, we have to make a reasonable judgment each quarter as to whether the prospect of a risk crystallising is really that high and we should get back to 1%. At some point, maybe risks will build as credit begins to grow again. At that point, I would expect the countercyclical buffer to go beyond 1%, for example.

Q181 **George Kerevan:** You will take that set of decisions, as you have expressed it, despite the fact that in the last six months there is clear evidence of a very serious rise in unsecured consumer credit? There are signs of elements of heating in the economy, as a result of loose credit, but you do not think that is an issue to take into account.

***Alex Brazier*:** It is an issue to take into account. We have to balance two things. One is whether there is a reasonable prospect of risks materialising, the economy turning down or there being some shock that forces banks to hoard capital and restrict lending. That is ultimately what we are trying to avoid with this. We are trying to avoid the banking system amplifying that sort of situation. Against that, we have to balance the fact that the risk level might actually be building over time. You allude, quite rightly, to the build-up of consumer credit.

The question for us on that front will be how far the risk is building and what, if any, is the right instrument or range of instruments to consider in order to address it. To put that particular thing in context, consumer credit growth of nearly 11% is a difficult number to ignore. It is very rapid. To put it in context, however, overall household credit growth is about 4%. Consumer credit, although it is very rapid, is only a small share, about 12%, of overall household credit growth. We are not in a position where mortgage credit growth is particularly rapid.

We have a chance to take a considered approach to this issue. Overall, household debt has come down by about 20 percentage points of income, although it has ticked up recently. We can take a considered approach to consumer credit, but, as I say, it is a difficult number to ignore. The question will be whether bank capital is the right instrument with which to address the issue. In part, it probably is, because we want to ensure lender resilience, and in the stress test we had a very severe consumer credit stress. The impairment rate on consumer credit was about 20%, and it drove about £20 billion to £25 billion of the overall impairments in the stress, as a result of which banks need to hold more capital. If consumer credit goes on growing at this rate, that element of the future stress tests will get tougher and tougher.

At the same time, we have to ask ourselves, as we have on mortgage credit, whether there are other instruments that have positive side effects. On mortgage credit, as you know, what we have done is to limit the growth of high loan-to-income mortgage lending through the affordability test and a backstop measure. That has the benefit of both boosting bank resilience, which we saw in the stress test this year, and also boosting overall household balance sheet resilience, which, as we show in a review in the Financial Stability Report, is pretty positive for economic resilience more generally.

The countercyclical buffer is not the only instrument available to us as we balance these things. We need to carefully consider, and we have the opportunity to do so, how we use our full range of instruments to address the risks we face.

Q182 **George Kerevan:** Mr Kashyap, just to paraphrase the question I am asking, though you look at the countercyclical buffer quarterly, given that it will be difficult, in my humble opinion, to crystallise out the risks inherent in the Brexit negotiations until they are finished, are we saying that the countercyclical buffer will be zero for the next two or three years?

***Professor Anil Kashyap*:** I do not think that that follows. I read our remit to be very clear that we are supposed to be worried about the resilience of the financial system. That has to be a forward-looking judgment. If we are scared of our shadow and say we will never get on with it, we will fail. If conditions remain benign or managed, and they look standard, then it would be wholly appropriate to move towards normalisation. If something happens, it can be released. Part of the reason for doing this proactively was to show that there is no doubt that these buffers can be released and that banks will not hoard capital. There is something in the Financial Stability Review that says almost exactly that sentence. That does not mean it is stuck down forever.

Q183 **George Kerevan:** Mr Taylor, I am still slightly confused as to whether the Brexit period of negotiations is not an element that weighs in determining standard risk. If it weighs in determining standard risk, it seems to me that you are caught in a cycle where you will have to keep the countercyclical buffer near zero. If it does not count as part of the standard risk, why have you taken all these measures in the last six months?

Martin Taylor**:** That is nothing standard about Brexit at all, Mr Kerevan, in any way.

George Kerevan: I thought you might say that.

Martin Taylor**:** At the risk of confusing you further, I am going to agree with my colleagues. You should recall, perhaps, that we had already raised the buffer before the referendum, and we were clearly signalling that we were on our way to 1%. If the Brexit vote had gone the other way, we would be at 1% by now, which as the Governor has said is the normal resting point.

I feel certain that we will not sit here wringing our hands and saying, "Oh, this is terrible; the Brexit negotiations create uncertainty; we cannot touch the buffer." We will look at the state of the economy, the state of the banks and a number of indicators. We have said that it would take very material change for us to make a move before June of this year, but I am sure the banks can see how the economy is performing and see their unsecured loan books. They will draw the same conclusions that we might.

Q184 **Rachel Reeves:** I want to build on some of the things that George Kerevan was questioning Alex Brazier on, particularly around consumer credit. It looks to me, from the headline figures, that the growth in consumer credit over the last year is pretty extraordinary. Although, Mr Brazier, you say that it is below its previous peak, it grew by 10.8% in the last year. That is the fastest rate of growth for 11 years, and if it grows by the same again in the next year it will exceed its peak of £208 billion in 2008.

You, Mr Brazier, sounded quite relaxed about the current levels of consumer credit and its growth, and your chief economist, Andy Haldane, said last week that there are reasons not to be too alarmed by the tick up in consumer credit, but it is absolutely something you will watch carefully. Do you think there is a risk, Mr Brazier, that we are being too complacent?

Alex Brazier**:** I would never characterise myself as relaxed, just to clarify; I was not hired to be cheerful. On the facts, I was not denying the fact that consumer credit growth, as we see now, is extremely rapid. This is a very difficult number to ignore. I just put it in the context of overall household credit growth, which includes secured as well as unsecured credit. Those growth rates are not unduly strong, but are difficult to ignore. The question for us will be what financial stability risks are building as a result of this. I would just highlight two or three issues.

The first is about lender resilience. One of the developments we should be alert to, and are, and have been discussing, is the loosening of credit conditions in consumer credit. 18 months ago, this was largely a car finance phenomenon, and effectively that is a secured form of lending, the growth of PCP purchase. That has now broadened out to include personal loans and credit cards, and we have seen some indications of a loosening of credit conditions: for example, a doubling of interest-free periods at the start of credit card loans. That is a cause for us to watch this, and be very alert and vigilant to it.

The second issue, though, is that, in terms of the numbers, it has been quite a significant driver of consumer spending. If you look at the extra flow of consumer spending over the past year, compared to an alternative where it was just flat, that is about £30 billion. The growth of consumer credit over the past year is £20 billion. That puts it in some sort of context, and that is why it is important for us to consider how, and if, we should address this from a financial stability perspective. Because it has both a lender resilience aspect and a broader economic resilience aspect, we need to consider that, and the costs and benefits of the alternative options, very carefully.

Q185 **Rachel Reeves:** There are a number of things I want to explore a bit more. You said, early on in the answer to my question, that this matters if you think there are financial stability risks, whatever those risks might be. You mentioned credit card debt, which is now at a record high of £66.7 billion, up £600 million in just one month. You give some reasons for that with the growth of 0% interest for longer periods of time on that credit. What do you think are the financial stability risks from this growth in consumer credit that we have seen over the last year?

***Alex Brazier*:** I would highlight three. The first is that, of course, it tests the resilience of the lenders. As I say, in the stress tests we were very keen to stress that this year. We put very large impairments on consumer credit into the test. If consumer credit were to go on growing at these rates, those impairments in the tests would get bigger. Banks' books would be bigger, and probably the loan quality poorer as well. We have taken the recent growth and those factors into account in this year's stress test, and, as a result, banks need to hold more capital to pass the test. Lender resilience is a key aspect, and we address that in part through the stress test.

The second issue, which is where there is a link to mortgage lending as well, is the general resilience of the household sector. We have been very alert, as an FPC, over a number of years to the growth of household debt, partly because a highly indebted household sector is one that is more vulnerable to shocks, should they come along. We show in the report some evidence about how, completely unsurprisingly, countries with very high levels of consumer credit and household debt tend to have deeper recessions for a given shock. In terms of our objective, which refers to levels of debt and leverage, we have a perspective on overall economic resilience to a range of shocks. That is another channel.

The third channel is that the level of household debt can, in fact, be a source of economic shock in and of itself. Were we to arrive, as we did before the crisis, at a position where there was a so–called debt overhang, where households had effectively taken on more debt than they later decided they could repay, it triggers a deleveraging and a sharp rise in household saving, and falling consumer spending. Through those three channels you get links back to financial stability, and those are the three channels we are, and will be, considering.

As I say, we can take a considered view on this, to weigh up the different costs and benefits of the various options available to us.

Dr Mark Carney**:** I will just supplement one aspect of that. I will start with the caveat that I am neither complacent nor relaxed at any time.

Rachel Reeves: You want to go one further. You are neither complacent nor relaxed.

Dr Mark Carney**:** Nor the product of the two. One thing to look at is that British households have spent a number of years improving their balance sheets. They have worked hard and paid down a lot of debt. The headline figure is 20 percentage points of debt to income paid down; now we have seen it trough out and just starting to increase. Highly vulnerable households have fallen quite sharply as well. Where households have difficulties is when their debt service ratios, as you know, get above 35% to 40% debt to income. That is the experience here, in Canada and elsewhere.

That has been cut in half since the crisis, as a proportion of households. It is detailed in the Financial Stability Report. We look at that as an overall. It partly informs the second two of the risks that Mr Brazier was raising, in terms of household vulnerability and this debt overhang point. What we have then looked at is what it will take for that to come up back towards historic levels. Obviously, we do not want to end up where the economy was in 2008-09, because one of the reasons why the recession was so deep and prolonged was the overhang of that debt and the behaviour of households. It is a relevant point that there has been quite a substantial improvement, in part because people have not been borrowing and have been paying it down. They have now started to borrow.

The final point I will make is a macroeconomic one. One of the concerns going the other way, albeit starting from a better base, is that there is some prospect that real income growth will go from around 3%, where it has been running for the last year or so, to 0.5% or lower. We will see what actually happens. This debt build-up, if it continues, is driving consumption and the ability to service. Those numbers could deteriorate. As per Professor Kashyap, we have to look forward and think about that as a committee.

Q186 **Rachel Reeves:** Building on that and Mr Brazier's second point about household resilience to this level of debt and borrowing, Peter Tutton, who is the head of policy at StepChange, has said, "Levels of outstanding borrowing are approaching the 2008 peak". He goes on to say, "Lenders, regulators and the Government need to ensure that the mistakes made in the lead-up to the financial crisis are not repeated and that there are better policies in place to protect those who fall into financial difficulty."

The Money Advice Trust says that there has been a spike in calls to their phone line, the National Debtline, and a lot of those are about consumer credit and difficulties people have got into. I am worried about household resilience, and particularly the resilience of people who can least afford to get into this situation. Dr Carney, you raised the point there about household spending and the very strong retail sales numbers that we saw over Christmas. I wondered to what extent they are being fuelled by this increase in consumer credit, rather than because of income growth or increased confidence.

***Dr Mark Carney*:** We do not have all the data in; we have some corroborating information to suggest that, yes, the pace of credit growth has maintained. I do not think it is entirely surprising that that momentum appears to have maintained itself into the holiday season, although we do not really know. As Lord King always said, the true meaning of Christmas is not revealed until Easter, both in the statistical and theological sense. We will see what actually happened there.

The way we approach this is to look at those aggregate figures, as I have given you. We also do surveys of 10,000 representative households, along with NMG, to get a better sense of, in aggregate, moving from things like calls to debt helplines, how many people are worried about their financial situation, feeling the pinch. What would happen to their spending behaviour if there were an interest rate shock or an employment shock? Those figures in general have been improving. It is an annual survey; in general, they have been improving alongside the aggregate.

People's perceptions of job security, not just levels of employment, are also still pretty strong. All of this is consistent. We just look at the aggregates and whether there is a resilience problem coming up. The conjunctural question is, if there is a slowing of the economy, whether this will amplify and turn. We as a committee will have to think about, and it is a big call, whether there is anything that should be done, above and beyond making sure the core of the system is resilient to this. It is a big step to go beyond that, and so we have to think about it hard.

Q187 **Rachel Reeves:** Finally, then, on what can be done if you begin to think that this is a material risk to financial stability or, indeed, to economic stability, Mr Brazier and Dr Carney, you have both mentioned changes that the Bank has made in terms of access to mortgage lending. Mr Brazier, I think I am right in saying that, because of tests you have done of the resilience of lenders, you have asked them to put aside more capital because of the growth in consumer credit.

Alex Brazier: As a result of the stress tests, but yes.

Rachel Reeves: You have taken some specific actions around mortgages. You have told lenders to put more capital aside, because you have some concerns about the resilience of the growth in consumer credit. What more can be done if you are worried specifically about, for example, the credit card offers that you have already mentioned, Mr Brazier? What more can be done and what sort of triggers would be necessary to take action?

Dr Mark Carney: The triggers would be the judgments of the committee. There is a range of tools that we could use, above and beyond stress testing of capital, which is a core tool you have just highlighted. The discussion we had around the countercyclical buffer is relevant to this discussion. It is a resilience point that would have the ancillary impact on credit provision at the margin. Parliament has given us powers over debt-to-income provisions around mortgages.

We currently, as you know, have provisions in place around loan to income, but that is not comprehensive; it does not capture this. The better lenders look at aggregate debt to income, but it would be possible, if appropriate—I am not signalling it—that we would look at adjusting that guidance. It would not be guidance but a straight decision. However, we have to, in all these cases, do a rigorous cost-benefit assessment, if you will, of the severity of the potential problem and the impact.

We are trying to maintain strong, sustainable, balanced growth on a longer time horizon than the MPC, but we do not want to act for the sake of acting. We need to see that the three risks Mr Brazier has raised, in aggregate, are material enough to justify it.

Q188 **Rachel Reeves:** You have these additional powers around mortgage lending, and they were given to you, in part, because the last crisis was, in part, because of excessive mortgage lending to people who could not afford that lending. You have those powers, but you do not have specific powers around, for example, credit card and unsecured debt, apart from the countercyclical and the capital requirement. I am not saying that you necessarily need additional powers, but I am interested in your views. Is it right to have those specific powers around mortgages, but not around other forms of credit, both secured and unsecured?

Dr Mark Carney: My personal judgment is that it is appropriate that we have the powers that we have, and I would not ask for the additional powers. First off, we have an ability to make observations and make requests of other authorities to consider using their powers, if appropriate, for macroprudential reasons. We could provide a direction or suggestion to the PRA in using their supervisory powers in this area, if appropriate. We do not have to have the automatic power.

Rachel Reeves: Why are mortgages different, then?

***Dr Mark Carney*:** The bigger point is that, as Alex said, secured credit is 87% to 88% of the outstanding. We have powers over the core of it; this is an important marginal element. The value of having the powers that we have is a couple-fold. First, if we decide to act, the action takes place immediately, and we do not end up in a scenario where we say, "We will tighten mortgage rules in six months, after a consultation period", and people rush in and do the thing. Secondly, what rightly comes with those powers is an accountability mechanism and a requirement to do a cost-benefit report, have a specific review of the policy, etc.

We can act in these other areas, but it is not to the same standard. We have not used up Parliament's time. There are areas where we have an ability to influence, but we should not, in my personal opinion, have formalised powers over a very broad range of things. We have to justify it, and we could if we needed to. By giving us the debt to income test in mortgages, that gives us a big way to influence this, because it is on the flow there that it really matters.

Q189 **Helen Goodman:** Governor, the Bank of England is a learning organisation, and, when you say that you do not want to be signalling three months in advance, you have learned something from the problems that happened with the tax changes on buy-to-let earlier in the year. Would that be a fair interpretation?

***Dr Mark Carney*:** I think I had learned that lesson before that.

Q190 **Helen Goodman:** This is a problematic area as well, is it not, Mr Brazier? In the same way that personal unsecured credit is ballooning at the moment, house prices relative to incomes are now almost at the ratio that they were in 2008. Do you think this market is sustainable?

***Alex Brazier*:** I do not pretend to be able to forecast where house prices will go, but the key thing from our perspective is that that rise in the level of house prices relative to incomes has not been accompanied, as it was before the crisis, by a very sharp increase in household debt, or by much increase in household debt relative to income at all, in fact. At the same time, as the Governor alluded to, the number of highly indebted households, as a share of the population, has halved. Even though the housing market has evolved in that particular way, the threats to financial stability have not evolved in the way you might expect if you had just looked at house prices.

In part, that is because we have measures in place that guard against rises in household indebtedness, and in particular in the number of very highly indebted households. It is in part due to the nature of the activity in the housing market. From our perspective, it is not house prices per se that matter, but household resilience, which is about the level of debt we have just been talking about.

You also have to remember, when you think about house prices, that the underlying issue here is the rate of household formations versus the rate of housing completions. We talk about this in the Financial Stability Report. We are talking about rates of 150,000 housing completions versus 230,000 households being formed. In that circumstance, it is no surprise that you see house prices rising relative to incomes, but from our perspective what matters is not that but the level of household debt, and in particular the prevalence of very highly indebted households. Those show a completely different picture.

Q191 **Helen Goodman:** That is true, and you are right that the level of household formation is exceeding the housing supply at the moment. When you did your analysis, which you published in November, were you able to take account of the announcements the Chancellor included in the Autumn Statement, such as the housing infrastructure fund—I think he had four measures—which he thinks will deliver a further 100,000 affordable homes, or changing the grant rules for local authorities, which he thinks will increase the number of housing starts by 40,000? Were you able to take those measures into account?

***Alex Brazier*:** Practically, yes, but to all intents and purposes, for our analysis, which as I say is about household debt, they are not a decisive factor. The factor for us was the level of household debt, what it means for household resilience and how valuable our measures are in guarding against a situation where house prices continue to rise at these rates and household debt starts to rise as well. They are currently not having much of an impact, but they act as a guardrail against a rise in household debt. We came to the conclusion that our measures are very valuable in those circumstances.

This is in part because the counterfactual of a rapid rise in household debt, particularly at high debt-to-income levels, would not only threaten the resilience of lenders, for whom mortgage lending is 60% of their UK exposure, but also threaten the resilience of household balance sheets. We do some calculations in the report showing that, for given increases in the highly indebted household population, a typical response of consumer spending to any given shock might be 20% or 25% bigger. That is not helpful to economic stability generally, to monetary policy or to financial stability.

That is why we decided, after a careful cost-benefit analysis, to keep those measures in place, as a guardrail against the thing we are implicitly worrying about here.

Q192 **Helen Goodman:** I see. One of my concerns—maybe you deal with this, and, if you do, that is great—is the extent to which you are looking at the averages, and the extent to which you are looking at different groups of people and different parts of the market. Obviously, the London market is quite different from the market in the north of England. Would you like to explain what you do on that?

***Alex Brazier*:** We look very closely—in fact, I would say we spend most of our time looking at them—at the distributions of these things, rather than the average levels. Although we look at the average level of household debt relative to income, a bigger area of focus for us is how that level of debt is distributed across the population, and, in particular, as the Governor said earlier, the number of highly indebted households that we see in Britain. That number has halved over the past few years.

Q193 **Helen Goodman:** That is very welcome, but who is it who is highly indebted?

***Dr Mark Carney*:** If I may make one point on this, it goes to the London question. I will pose a question, which is whether the London housing market is driving housing policy in the country. The answer is no. One of the reasons why we came on to the approach we did, to restrict the proportion of the flow of mortgages to no more than 15% above the 4.5 loan to income, was a couple-fold. We saw in a number of markets this shift towards very high loan-to-income mortgages, so the different price for the house in absolute pound sterling terms, but highly leveraged. Those are the types of mortgages that we were seeing, so underwriting standards were starting to slip; that is the first point. Those are the early stages.

Secondly, one of the ancillary benefits, although not the intent, of the policy is that, since most houses and flats in London are above that 4.5 times loan to income of residents, if you are a bank or building society lending in London, you end up filling up your bucket or allocation of high loan to income. That means you have to go outside the south-east to lend, in order to have an ability to lend more in London, if you follow that.

Helen Goodman: I do.

***Dr Mark Carney*:** It has the effect of pushing activity across the country. We are not running regional policy; that is not why we do it.

Helen Goodman: It is a fortunate side effect.

***Dr Mark Carney*:** That is a dynamic that is there.

Helen Goodman: Mr Taylor, do you want to comment on these issues?

***Martin Taylor*:** I do not have much more to say on mortgages, Mrs Goodman, but I would like to say something, perhaps, about consumer credit, which you and Rachel Reeves have talked about. This is obviously going to be a big concern for us over the coming quarter and into the second quarter. We need to understand a little more precisely what is going on. The bankers were telling us last year that one reason for the growth in consumer credit was the new mortgage rules, which made it harder for people not only to get a mortgage quickly, but also to add to their mortgage easily, in the way that they used to do.

It used to be quite commonplace, if you wanted to buy a new car and you had some equity in your house, simply to increase your mortgage. That, of course, is the cheapest finance you can get by miles, but there is probably a fat arrangement fee, and you probably have to wait quite a while to get it, whereas you can get a consumer credit loan like that. Although they are much more expensive, they are a better option than they used to be, given that rates in general are so low. There may be some kind of arbitrage and some shifting in consumer behaviour. That is one point.

Secondly, I have been wondering whether what we were seeing over the past couple of months was not households borrowing to buy durables in expectation that the price would rise because of the fall of the pound. That would be a perfectly rational thing for them to do, and would not necessarily be anything for supervisors and regulators to worry about, if that was what was going on. I have asked the staff to look at this. It is simply not clear that we are able to substantiate this theory. We need to understand a little more clearly what is going on, before deciding how much to worry about this and, if we are sufficiently worried, precisely what we ought to do.

It may well be that looking at the underwriting standards is the right thing. The Governor talked about debt to income. We have at the moment, as I understand it, the ability to make policy that, if you have a lot of consumer credit outstanding, would make it more difficult for you to get a big mortgage, but, once you have a mortgage, it does not allow us to restrict the amount of consumer credit that you can subsequently get. It needs a different and rather more surgical approach, if this is indeed a problem, which I am not yet convinced it is. It is certainly a flashing light, and I am sure we shall look at it carefully in the next quarter.

Q194 **Helen Goodman:** Professor Kashyap, do you want to comment? No. Given the dire state of the British housing market, I am not surprised. That is extremely wise; it is a very politically fraught area. Have you been consulted on the Government’s housing White Paper?

***Dr Mark Carney*:** I have not, but I look forward to it.

Q195 **Helen Goodman:** I have one final question, which goes back to the first question I asked. There has obviously been a slowdown in growth in the housing market. Mr Brazier, I will put this question to you. Do you think that is because there was a lot of forestalling prior to the end of the last financial year, or do you think it is Brexit-related?

***Alex Brazier*:** It is very difficult to disentangle, but what you can see in the housing market is a very clear movement in the buy-to-let segment. You see the big forestalling effect in March time; you see a big fall-off afterwards. Interestingly, what you do not see in the buy-to-let market is a recovery thereafter. We are still running at levels of completions in the buy-to-let market well below where we were, even before any of the measures were announced.

That is not surprising, given that what is in prospect in March is the removal of mortgage interest tax relief for higher-rate taxpayers. To some extent, although I would argue a much lesser extent, it is also due to the introduction recently of the floor on underwriting standards for lenders on buy-to-let mortgage lending. For me, the major driver of the pattern of approvals over the course of the past year has been what has happened in the buy-to-let market. It is very difficult to disentangle the various effects.

***Dr Mark Carney*:** I will just make a quick point: the FPC this time last year was looking at the buy-to-let market, the risks and whether they could amplify overall risk. Knowing that these tax rules were coming into effect, and that there had been this affordability test put in through a PRA supervision, our judgment was, "Let us see how all this plays out", because we expected that there would be some slowing of the pace. It still remains to be seen; we almost have to get to the end of this tax year before we start seeing the underlying momentum in buy-to-let again. If I may say so, the FPC was right to look at it, but not to do anything, because there was a lot going on and it has had a big impact.

Q196 **Helen Goodman:** So you were quite relaxed.

***Dr Mark Carney*:** Prudent.

Chair: Thank you very much for coming to give evidence to us this afternoon. As usually happens when in the UK we discuss financial stability, we end up discussing the housing market. I hope that we are not on the same whirligig that we have been on since the war, and that the arrival of these new powers with you will contribute to a better cycle than we have had in the past. Thank you very much for joining us this afternoon.