



## Treasury Committee

Oral evidence: [Bank of England November 2015 Inflation Report](#), HC 628

Tuesday 24 November 2015

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Members present: Andrew Tyrie (Chair); Mr Steve Baker, Mark Garnier, Helen Goodman, George Kerevan, Mr Jacob Rees-Mogg, Wes Streeting

Questions 1-86

### Examination of Witnesses

*Witnesses:* **Dr Mark Carney**, Governor, Bank of England, **Andy Haldane**, Chief Economist and Executive Director, Monetary Analysis and Statistics, Bank of England, **Professor Kristin Forbes**, External Member, Monetary Policy Committee, and **Dr Gertjan Vlieghe**, External Member, Monetary Policy Committee, gave evidence.

**Q1 Chair:** Thank you very much for coming to give evidence, the four of you, today. We have a very interesting couple of hours ahead of us on monetary policy, primarily. I want to begin with a general question to you, Governor, if I may, about the Bank of England and central bank independence. The Bank has been given huge new responsibilities, some of which one has the impression sometimes politicians might wish they had not handed over. Is there any backseat driving going on, and is there any cause for concern about your ability to exercise the independence that you have been given on a statutory basis? Do you see this as a trend around the world when this sort of discussion is taking place at the moment in the Fed?

**Dr Carney:** Thank you very much, and good morning everyone. Maybe I will start generally, in terms of pressure on central bank independence around the world. I would say that pressure has increased in recent years. It is entirely appropriate that central banks are subject to intense scrutiny, given the scale and importance of their responsibilities, but I would suggest that, given the burden that has been placed on monetary policy in particular since the crisis, there have been some tendencies towards challenging that independence. We see it most tangibly in the United States where there is the so-called FORM Act, which is working its way through the House of Representatives. Under that act there is a provision that would measure monetary policy against a very simple rule—

the so-called Taylor rule—and would give responsibility to the national auditor to oversee, comment on and judge the appropriateness of monetary policy decisions. I noted that Chair Yellen wrote last week to the leadership of the House to give her views on that.

The lesson learned in the United Kingdom has been applied more broadly around the world: the value of constrained discretion. As this Committee well knows, the Bank does not have independence in terms of its goals. Its goals are set by Parliament under Section 11 of the Bank of England Act. Our objective is price stability, and that price stability is defined in the annual remit letter from the Chancellor to the Monetary Policy Committee. Subject to achieving price stability, we are to support the economic policy of the Government, which is also outlined in that remit letter. We have operational independence, in other words how we conduct monetary policy in order to achieve that goal, and we have a very strict and comprehensive set of requirements to explain what we are doing, how we try to do it, and ultimately—I will not go into all of the details—the core of that accountability mechanism is in front of this Committee. We have so-called constrained discretion: clear goals set by Parliament. We act within those remits to achieve those objectives.

As you know, in 2012 the Bank was given additional responsibilities for financial stability and for safety and soundness, including the safety and soundness of financial market infrastructure, and most recently it has been given responsibility as the resolution authority for banks, building societies and others. In all of those cases, we operate under similar circumstances, where we have clear objectives given to us by Parliament. We have constrained discretion and operational independence, in order to achieve those objectives and to insulate ourselves from political or other influences in the discharge of those objectives. The Bank of England Bill, as you are aware, is currently just beginning its process in the House of Lords. This is an opportunity to further clarify, reinforce, underline and confirm that framework, which has served this country well. I am very pleased to say that we, as the Bank, have been working with the NAO. I have personally been working with the Comptroller and Auditor General to ensure that the NAO can play an appropriate role in reviewing the economy and efficiency with which the Bank uses its resources. In that regard it would supplement the very important role of Court in oversight. But at the same time our policy independence—that operational independence that is at the heart of ensuring that we can achieve our objectives—would be protected.

**Q2 Chair:** In a nutshell, you are saying that you can see some evidence of this going on in the United States, but over here you are, so far, reasonably relaxed and do not have anything to report to us by way of prejudice or compromise or attempt to compromise that independence.

**Dr Carney:** Chairman, it is crucial our statutory independence is maintained from an operational sense—how we achieve our policy objectives—and that our accountability mechanisms are absolutely clear. It is rooted in this Committee, but it is also supplemented by our reports, by the publication of minutes, by the publication of transcripts, by speeches and other mechanisms to explain what we are doing in order to achieve those objectives. We will always be subject to pressure, from banks, insurance companies and from other interested parties, but it is our job to resist that pressure and to explain our actions to the people of the United Kingdom.

**Q3 Mr Rees-Mogg:** Governor, you discussed the effect macro-prudential tools have on monetary policy, and the way that they interrelate and, taking it slightly further, the extent to which the tightening of risk levels has contradicted the very low interest rate. I wonder if you could say a bit more about that, and the extent to which the MPC needs to take into account what is happening in the macro-prudential area, especially if that is fighting against what it is trying to do in the monetary policy area?

**Dr Carney:** That is an extremely important question. First, let me answer in terms of process, which is one of the things we have been doing in the last few years, is having more joint meetings of the MPC and the FPC. In fact, that is one advantage of moving towards eight meetings a year of the MPC. Physically, in terms of calendar space, we will be able to have more of those meetings. It is vital that each of the committees understands what the other is doing and how actions taken by one could affect the objectives of the other.

In terms of the current stances of monetary and macro-prudential policy, I might amend one word that you used: instead of “contradict”, I would say that at present macro-prudential policy is complementing monetary policy. I will explain. One of the concerns in a low-for-long interest rate environment—in which we clearly are and are likely to remain for some time, even with limited and gradual rate increases—is that there would be excessive risk-taking, including in our most important real property markets, in particular the housing market. As you well know, historically underwriting standards have deteriorated in these periods. In the spring of 2014, the FPC took out insurance against that. The measures that the FPC took to introduce restrictions on loan-to-income, as part of a portfolio of mortgages that a given bank or building society would have, and also to introduce a minimum interest rate test did not immediately bite in terms of the activity of any institution, but they prevented the deterioration of underwriting standards—a move from responsible to reckless, in shorthand. That was certainly possible in this low interest rate environment. In that regard, it was not our expectation that the measures taken by the FPC would have a material impact on the pace of growth and development in the housing market. Certainly they would reinforce the sustainability of that growth.

In actual fact, the combination of the then possibility of rate increases, those macro-prudential measures and other factors, including the mortgage market review measures coming into place, contributed to a slowing in the housing market and so a modest deceleration in growth, from that specific factor. With the wisdom of hindsight, that appears to be what has happened, but overall I would suggest that the macro-prudential measures that have been taken thus far have reinforced the sustainability of growth.

If I may continue with one other point on this, it is possible, though, to your question, that some macro-prudential measures could slow the pace of growth in real time. For example, if the FPC were to decide to activate the counter-cyclical buffer, the additional capital requirements would ultimately be passed on in higher interest rates to businesses and households, which would be akin to some form of monetary tightening. It would be done to ensure the sustainability of the credit cycle and increase the resilience of banks to the credit cycle, but it could have that impact. Those are discussions—the possibility of the activation of the counter-cyclical buffer and the potential impact on the macro-economy—

we have first at the FPC and then between the FPC and the MPC. Ultimately it is a decision for the Financial Policy Committee whether or not to use that buffer, but the MPC would be informed.

The last point I would make on this is that clearly it is possible that the MPC could take monetary action for ultimately financial stability purposes. In our language, we are not the first or even the second line of defence, but if the view is that other macro-prudential tools are exhausted or likely to be ineffective, and monetary policy would be more effective, we could use monetary policy to address macro-prudential objectives. We would have to clearly explain that was what we were doing and also the impact in terms of the timeline over which we would expect inflation to return to target—all things being equal, it would delay the time over which inflation would return to target if we were below—and we would have to justify it in terms of our objectives as per the opening question, with respect to our independence.

**Q4 Mr Rees-Mogg:** How much of a grey area is there between the two, macro-prudential and monetary policy? To what extent has the Bank made the decision that it will try to get this right through regulation rather than price, assuming what the MPC does is price and what the other parts of the Bank, particularly the FPC, do is regulation? This is moving away from what the Bank had done previously to regulate the money supply by price and to try to go back to the 1970s, when there were many more credit controls and an approach to the creation of credit in the economy more dependent on regulation. Does this have the difficulty that it becomes much more susceptible to judgment rather than price, which leaves everybody in much the same position?

**Dr Carney:** Let me go to difficulty first. In general, the conduct of macro-prudential policy is more difficult, if I may, than monetary policy, for a few reasons. One, there are more instruments, in general, that could be used. There is less of a history with activist macro-prudential policy than there is with monetary policy. That puts a premium on clear communication. It puts a premium on gradualism wherever possible. It definitely reinforces the importance of close communication between the Financial Policy Committee and the Monetary Policy Committee. I would say that the objective, in general terms, of the Financial Policy Committee is to enhance resilience at the core of the system and reduce the risk of tail events—“busts”, if you will—in the credit cycle.

Members of the FPC have to be conscious of the price impact, and ultimately the macro-economic impact, of their actions, which is why the dialogue is crucial. I would say that the expertise of the Monetary Policy Committee and the monetary experts in the Bank is very much complementary to the perspective of the FPC. The perspective of the FPC is that we do need to take into account these macro effects in taking our decision.

**Q5 Mr Rees-Mogg:** Does anyone else on the panel want to comment on this? Mr Haldane?

**Andy Haldane:** I am happy to. Maybe in thinking about this macro/monetary distinction, one way of cutting that would be as you did, which was between prices and quantities.

Another way would be to think in terms of the price and quantity of risk-free assets, which is monetary policy, and the price and quantity of risky assets, which is macro-prudential. That is quite a helpful way to think about it, because plainly both are relevant to credit conditions, which underscores the point that the Governor made about the interdependence between the FPC and the MPC and the importance of joint meetings. There will be times when, on the face of it, these things do appear to be pulling in opposite directions, but that is really a matter of optics rather than substance, I think. Ultimately we have two objectives: keeping the macro-economy on an even keel, and keeping risk-taking in the financial system on an even keel. For that we do need two arms, and that is what we now have in a way that was not true pre-crisis.

**Dr Carney:** Can I just supplement one thing? To the point that Mr Haldane made in terms of potential contradiction, it is important to remember the difference in time-horizon for those two objectives. One of the lessons we have all appropriated from the crisis is that you can have price stability—the achievement of the monetary objective—but you could have ultimate financial instability and risk building up. Leaning against the wind, against those risks, changing the price and quantity of risky assets, in the words of Mr Haldane, can satisfy the medium- to long-term objective—the horizon of the credit cycle, which tends to extend, as you know, to around a decade as opposed to the monetary cycle, which is two to three years. The combination of the two can lead to that ultimate objective of strong, sustainable and balanced growth over the horizon, even if the use of macro-prudential policy slows the pace of the economy in the near term; ultimately it is a more sustainable pace. Those are judgments that have to be made and they have to be clearly explained.

**Professor Forbes:** I just wanted to come in on the interaction of these two committees, from the viewpoint of an external member. Jan and I are the two who do not sit on these two committees. My viewpoint is that the two have worked quite well, in terms of interaction. We have some regular meetings together; we have regular luncheons on topics that are of interest to both committees, which have been very informative. We also have briefings; we had one about a week ago on a topic that is relevant to both of us. I find the most information from informal interactions. We regularly interact with the FPC, on some research projects and on other events at the Bank. There is quite a good dialogue, at least from my viewpoint.

In terms of the goals of the committees, I agree with the Governor's comments that they really are complements. I see the Monetary Policy Committee mandate as clear; our goals are clear, but I see the Financial Policy Committee as focused more on the overall resilience of the financial system and addressing risks in individual markets, which are very rough goals for monetary policy to address. Also it is addressing tail-risks, which are very hard for monetary policy to address. I see the two as complements. The Financial Policy Committee can address this overall resilience, risks in individual markets and tail-risks, and that allows the Monetary Policy Committee to focus on monetary policy for the overall economy based on our baseline scenario.

**Q6 Mr Rees-Mogg:** Would you like to add anything?

**Dr Vlieghe:** I wanted to make just two quick points. The first is that you are right to be concerned that we should not try to go back to the 1970s and regulate inflation, but that is not at all what the FPC does. The FPC is regulating to increase resilience and, as the Governor says, sometimes that may have an impact on growth and inflation, but they are not primarily concerned with growth and inflation. The other thing is a question that we often get, and people are right to be concerned about this, when thinking about whether it is a macro-pru question or a monetary policy question. If you have concerns about a very isolated sector, that is a prime candidate for a macro-prudential measure, but if you see little pockets of overheating and there are more and more across the economy, increasingly that is telling you that this is no longer a macro-prudential issue; it is a monetary policy issue, and we are very well aware of not falling into the trap of using that wrong instrument. So far it has only ever been about isolated pockets, and so it has been appropriate to have the first line of defence, but, as the Governor says, we may get to a point where we conclude that it is a monetary policy question, and there is a spectrum there and not a rigid divide.

**Q7 Mr Rees-Mogg:** Thank you. Moving on slightly, and I am afraid, Mr Haldane, you are the one person who is excluded from answering this, because it is on your very interesting speech *How low can you go?* How likely, Governor, do you think it is that interest rates will be persistently lower in this way for many years?

**Dr Carney:** To give my personal view, I do think that global equilibrium interest rates are likely to be lower than historic averages for a considerable period of time. I first effectively tried to say that quite clearly two years ago. It is one of the reasons why I think that rate increases, when they come, will be only to a limited extent. I do think that the real equilibrium interest rate in the United Kingdom is turning positive, and as some of the headwinds dissipate or reduce—not fully dissipate—it will most likely continue to rise, thereby making a given stance of monetary policy more stimulative. But that is a slow process. I do not think that the most likely scenario is that the equilibrium interest rate in the United Kingdom is negative, and therefore we need effectively to have negative interest rates. Obviously I do not think that given the current stance of monetary policy, and the proposition I keep putting to the committee is whether or not rates should be increased or there should be a change in the asset purchase programme.

**Q8 Mr Rees-Mogg:** By ancient tradition, the Governor of the Bank of England is not allowed to be wrong—and I approve of tradition—

**Chair:** It has been known. It has been known.

**Mr Rees-Mogg:** It is very rare—not for a very long time. But if it turned out that other instruments were needed, because the equilibrium interest rate was lower than it is, what tools, particularly independent members, do you think it would be sensible for the Bank of England to use? Obviously, I am thinking of negative interest rates, the abolition of cash, helicopter money. What sorts of ideas would you be open to considering?

**Dr Vlieghe:** For me, progressions in interest rates and further asset purchases are the first line of defence—the next tools that we go to. Of the other two things that you mentioned—the abolition of cash and helicopter money—the abolition of cash is an

interesting idea when thinking about how electronic payments might naturally evolve over the next few decades, but it is not a policy measure for the Bank of England to implement, to say that people cannot hold cash so that we can reduce interest rates further. At this stage I do not think that is appropriate. There are also really big problems with helicopter money or cancelling gilts or whatever you want to call it, because it is essentially saying that we are abandoning our inflation target. That is not something for us to decide, because we have been tasked with meeting the inflation target. The first two tools are the ones that would be actively considered, and not the second two.

**Q9 Mr Rees-Mogg:** Professor Forbes, would you like to come in on this? I would add the point that QE seems to have become less effective each time it has been used. If that is the case, and that interest rates are very low, is there much room left in the two most obvious tools?

**Professor Forbes:** Let me begin by saying that I find this conversation very much to be hypothetical, given the state of the UK economy—the solid recovery. I still firmly believe that the next move in interest rates will be up. We will not require loosening. If there were some sharp, negative shock and we did need to have a conversation about loosening monetary policy, my hierarchy would be to begin by lowering the Bank Rate. We do have some room to lower the Bank Rate. We would have to evaluate at that time exactly how low it could go without creating costs that outweigh the benefits. Then the next in the hierarchy that I would support considering would be additional QE. Yes, there is some very weak and mixed evidence that maybe QE became less effective, but the evidence in the academic studies I have seen suggests that is because QE was most effective initially because of the contraction in markets and markets not functioning well. If whatever this hypothetical negative shock is led to a contraction and dysfunction in markets, QE might be very effective again. That is the hierarchy with which I would start before switching to some of these other mechanisms.

**Q10 Mr Rees-Mogg:** The Governor will not be wrong anyway, will you, Governor?

**Dr Carney:** Thank you for that vote of confidence. The only thing is that Governors always caveat what they say, and I said that is the most likely scenario.

**Q11 Chair:** Dr Vlieghe, you have been in the markets, you have been a bond strategist, and you have worked in the private sector recently. Do you think that market participants spend a great deal of time watching every word of what the MPC says or writes? I am sure many of them are watching these exchanges now. Do you think that they pay enough attention to what the FPC does?

**Dr Vlieghe:** Yes, I think they do, but there is a greater element of learning, in that if they have been watching monetary policy committees in various guises across the world for many years, they are quite used to the methods of communication, forecasts, statements, minutes, etc. Of course for the FPC that is all much newer. It is newer for market participants, but it is also newer for the FPC itself. There is a greater element of getting

used to each other, and whether we should say more or less—how should we communicate?

**Q12 Chair:** Is this a work in progress?

**Dr Vlieghe:** Absolutely, because it is much more recent.

**Q13 Chair:** Do you think that we would be wrong to conclude, having listened carefully to what all four of you have just been saying, that however subtly you are putting it about, the next move could be the counter-cyclical buffer rather than interest rates, for tightening policy?

**Dr Vlieghe:** It is not for me to prejudice the decision of the Financial Policy Committee. I am on the Monetary Policy Committee, so I will listen to what they decide and then conclude whether or not it has an impact for what I think is the appropriate monetary policy decision.

**Q14 Chair:** You are not wholly indifferent to what goes on down the corridor, are you? Indeed, you hold meetings with them, as we know.

**Dr Vlieghe:** That is right. I am not indifferent, but it really is not for me to comment on what they are likely to do or what they should do.

**Q15 Chair:** Just for clarification, I did not ask you whether you thought that they should act on the counter-cyclical buffer. I am asking whether you think it is possible that that might be the next move, on the basis of the facts as you know them.

**Dr Vlieghe:** It is a possibility, yes.

**Q16 Chair:** Yes. Therefore, what we have been hearing today is quite significant for the longer-term conduct of monetary policy, is it not?

**Dr Vlieghe:** That does not necessarily follow.

**Q17 Chair:** Why is that?

**Dr Vlieghe:** There is a range of decisions they could take, some of which could have a large and significant effect on the outlook for growth and inflation, and some of which would have quite small effects. If such a decision gets taken, we will evaluate the quantitative impact of it and then conclude whether it is material for monetary policy.

**Chair:** That is some help, but we might come back to this.

**Q18 Mr Baker:** It has all been very interesting already this morning, and I think you have all agreed with Charles Bean, who said that a return to a world with higher neutral interest rates would be rather desirable. Is it the case that you all agree with him, and how do you see that return happening? Do you think that it can happen naturally, Professor Forbes?

**Professor Forbes:** We do not fully understand where the neutral interest rate is today or what has caused what appears to be a fall in the neutral interest rate, but the analysis I have seen suggests that one big factor has been demographics. When you have a large bulk of the population who are middle aged and at peak saving, the neutral interest rate tends to fall. We are now embarking on a period when we will see less rapid population growth and a rapid ageing of the global population. Just that natural demographic shift would be expected to increase the neutral rate of interest some. There are obviously many other factors that contribute, but I believe that will be an important one, so we should start to see that neutral interest rate begin very gradually to tick up naturally.

**Q19 Mr Baker:** Thank you. We have all agreed that policy is currently still stimulative, and indeed you have just spent £6 billion maintaining the stock of purchased assets. However, if we look at page 42, you have a very helpful chart that shows how the outcome for inflation is in the lower bound of what was predicted compared with August 2014. Can you explain why it is that inflation is so much lower than you anticipated in such an environment, Governor?

**Dr Carney:** If you cast your eye up just very slightly from that chart to the text above, it gives you most of the explanation.

**Mr Baker:** Oil prices?

**Dr Carney:** There is a 50% fall in oil prices. We take the futures curve of energy prices in our inflation forecast. There was not just in the futures curve but in option markets, as observed there, a very low probability ascribed by market participants to the abrupt fall in oil prices. Part of the explanation for that move is a change in the supply response—the reaction function of OPEC, and Saudi Arabia in particular. Ultimately, in the fullness of time, there have been reinforcing factors, such as the strength of the ongoing production from shale oil, but also a fall in global demand, as you are well aware.

**Q20 Mr Baker:** Would you not have expected additional QE to raise inflation back in line with your expectations? Do you think that UK QE would raise oil prices?

**Dr Carney:** In terms of the last bit of your question, no, we would not expect QE to raise oil prices, but equally part of the value of the framework here is that we are required to write a letter to the chancellor on a quarterly basis if inflation is more than 1% either above or below target, explaining the reasons why and what we are doing about it. In the current environment of the letter that came with this report, four-fifths of the deviation from target is explained by basically weak foreign prices, largely energy, but also imported goods prices. We, by and large, look through those energy prices. We have a more complicated judgment to make around the implications of pass through from higher exchange rate and foreign disinflation, and we do that by setting the horizon over which

we wish to return inflation to target. We have adjusted that slightly, given the persistence of pass-through work done by Professor Forbes and others at the Bank, recognising the degree and persistence of pass through. We have adjusted the horizon to around two years instead of within two years. The point is that, in terms of sharp moves in commodity prices, by and large we can look through those; they fall out of the inflation rate—

**Q21 Mr Baker:** I was going to ask you if you felt the Bank was rather powerless, but it sounds like you have changed the lens through which you view events in order to try to use those powers that you have on a different time horizon. But it feels like current events, as you have just described them, cannot be influenced in any meaningful way by the powers that the Bank has. Is that right?

**Dr Carney:** Yes. The peak impact of monetary policy is around six quarters: a sharp fall in energy prices or food prices, for example, drops out of the inflation rate, as you know, within a year. Sharply adjusting monetary policy to try to catch up to something that will be gone by the time you have an impact is not a sensible way to manage policy. From the perspective of the current conjuncture and the impact on British households, the net impact of these falls in energy prices is to reinforce the growth in incomes, and as a consequence we have the highest growth in real income since the crisis.

**Q22 Mr Baker:** Andy Haldane, you said in a speech in Milton Keynes in June—it is not a literal quote—that the interest rates are lower than at any time over the last 5,000 years. Is that right?

**Andy Haldane:** I said this in response to an answer I gave to a much earlier inquiry of this committee where I had said rather bravely at the time that rates were probably at their lowest ever level. When challenged immediately after that hearing as to whether I was sure that it was the lowest ever, we went away and did a lot of digging, and as best we can tell, back to Babylonian times, we are in uncharted territory.

**Mr Baker:** That is excellent—we are in uncharted territory. That is very much the kind of answer I have been looking for all of this time.

**Chair:** There may be a chart, but you do not know where it is.

**Dr Carney:** You have a chart.

**Andy Haldane:** I have a chart in my speech.

**Dr Carney:** He has a chart for everything.

**Andy Haldane:** I do.

**Q23 Mr Baker:** This is not enough for you, though, is it? You have made a speech proposing the abolition of cash and negative interest rates. You referred to proposals to randomly invalidate banknotes in order to implement something approximating a negative interest rate. How would you expect negative interest rates to affect the economy?

**Andy Haldane:** Just as a bit of context here, this was very much along the lines of the precautionary principle, which is that we do not know how long global real rates will stay at their current levels. We think that some of the forces there are long-lived and structural, so this could be with us for some time. It is unclear how long. We have been surprised about how low they have gone already. We may be surprised about how low they remain. Given the possibility that we may be where we are in real rate terms for somewhat longer, I thought it was useful to think through what insurance mechanisms of a monetary policy nature we might have at our disposal. It is very much in that spirit that I was reflecting on the options, largely that others had already put on the table.

I think you will find, if you go back through the speech, I was certainly not proposing the abolition of cash. In fact, I was arguing a bit against it. I was not arguing for the invalidation of banknotes. Others, again, have proposed that as an option. Is it worth, as we are, thinking through longer term whether there are other means of loosening the technological constraint that comes from currency being non-interest bearing. That is a worthwhile area of research pursuit, and indeed we are pursuing it as a matter of research. On the face of it, it sounds a bit wacky, doesn't it? The truth is that 95% of all money is already digital and pays interest. 80% of all Bank of England money is digital and pays interest. We are talking about that final currency component. Was it worth thinking through the consequences of that being digitised and therefore with the option, at least, of paying interest. Paying interest in good times, and perhaps levying negative interest rates in bad.

At the moment that is no more than a research proposition. There are lots of reasons why it might not be a good idea, but it is certainly on our research agenda in the spirit of this precautionary principle.

**Q24 Mr Baker:** Thank you very much. Our mutual friend, Professor Kevin Dowd, who was at your university when you studied—

**Andy Haldane:** He taught me. He was.

**Mr Baker:** He taught you? Brilliant. Well, I am sure he will be very pleased if I provide you later with this 31-page rebuttal of your speech.

**Andy Haldane:** Just 31 pages?

**Mr Baker:** 31 pages. Very helpfully, it took me a while to make my way through it. One of the things that he writes is that “the first problem with negative interest rates is, quite simply, that they are unnatural. As any decent economics textbook will explain, economic theory suggests that interest rates should be positive, and for two different reasons. The first relates to time preference”—and it goes on—“and the second relates to the productivity of capital” Can you imagine a world in which negative interest rates were natural—that people’s time preferences had changed so beyond our present understanding that negative interest rates reflected the preferences of actors in the economy?

**Andy Haldane:** We have already been surprised by how low interest rates globally have already become. Currently, as best we can tell, we have global real rates around zero, perhaps negative. The key word here is “real” – what matters to savers, to borrowers are interest rates adjusted for inflation. So you ask the question: is it possible to anticipate

negative nominal rates of interest? We have examples of that across Europe already. It can make sense, in a world in which inflation is itself negative. In other words, real rates of interest might then be positive. I do not think it is impossible to contemplate this. Is it a normal state of events? No, I do not think it is a normal state of events, but the same would have been said about real rates of 0% five or 10 years ago.

**Q25 Mr Baker:** Just to be absolutely clear, negative rates would mean that people were so averse to present consumption and so future-oriented that you had to charge them to hold cash?

**Andy Haldane:** I would not view that as the normal state of affairs. What I was talking about is whether there are occasions, for example when the economy is struggling or when price pressures are weak, when having that option might be a useful thing. That was the spirit of the thought experiment that I was going through.

**Q26 Mr Baker:** Governor, about 15 years ago one of your predecessors, Mervyn King, made a speech in which he said, “I tell you that our ambition at the Bank of England is to be boring. Not, I hasten to add, at events like this. But in our management of the economy is where our belief is that boring is best.” Is it still your belief that the Bank of England should be boring?

**Dr Carney:** It is my belief on that. May I just take this occasion to be absolutely clear: there are no plans to abolish cash at the Bank of England. As Mr Haldane just indicated, this is a thought experiment and entirely consistent with his role as Chief Economist at the Bank of England. There is no intention to abolish cash. Cash use continues to grow in this economy. We do have a responsibility to think about how the financial system will evolve. A potential role for digital money alongside cash is something that we are researching and thinking through, but there is no intention for that. I also very much associate myself with the comments of Professor Forbes regarding discussions of negative interest rates. Speaking for myself and reinforcing what Professor Forbes said, the question in my mind is when is the appropriate time for interest rates to increase in this economy, consistent with the strength of the domestic economy?

However, to go directly to your question, yes, in an ideal world the role of the central bank is to ensure that people do not worry about inflation or deflation—that they view their financial system as being safe, sound and resilient, so that they do not worry about their financial system and they do not worry about a boom-bust cycle overall in the economy, with some latent tail-risks building up, and they get on with the more important things in life.

**Q27 Mr Baker:** I am delighted to hear that you will not be implementing what Professor Dowd described as monetary hell, but could I just ask Andy Haldane: when you previously knew Professor Dowd, had he invented the term “sado-economics”, or is that something that he has brought forward as a result of your speech?

**Andy Haldane:** I do not recall him using that in my presence. Maybe it is the sort of thing that he would not use in my presence, but not as far as I know.

**Mr Baker:** I hope that I have not upset you too much with its use today. Thank you very much.

**Q28 Helen Goodman:** Professor Forbes, I would like to bring you back to some slightly more practical questions and away from the esoteric theory that my colleague has been asking about. We talked about the labour market the last time you were at the Committee, and you very kindly sent me some numbers afterwards. One of the things you sent me was the ratio between the number of vacancies and the number of unemployed people. You sent it to me at the national level, because I had been complaining that the Government was no longer producing these at the constituency level for us. Have you got it disaggregated geographically, or do you only have the national figures on that?

**Professor Forbes:** We have quite a bit of data disaggregated, but I am not sure if we have that specific statistic. **I can get back to you on that. We have tremendous data from the agents, but I am not sure that we have exactly that statistic.**

**Q29 Helen Goodman:** Fine. It connects to something else that I want to ask you about with skills and working hours, but before I do I just want to draw your attention to what the report is saying about wage pressure and inflation expectations. “Unit labour costs were still rising more slowly than was consistent with meeting the inflation target in the medium term... Although some survey measures of inflation expectations remained below past averages, this was less true for financial market measures and the Committee judged that expectations remained well anchored.” What do you mean by that?

**Professor Forbes:** There is a lot in that long sentence you read. A number of measures of labour market tightness we look at are elevated and above pre-crisis levels. For example, vacancies are above pre-crisis levels. The vacancy-unemployment ratio, which I sent you, is around pre-crisis levels or a bit above. Short-term unemployment is lower than before the crisis. Some other measures of tightness in the labour market are a bit below pre-crisis levels, for example job-to-job moves are still slightly below pre-crisis levels, but all in all the evidence is of quite a tight labour market.

I also sent you some data collected by agents across the country, and that shows quite a bit of tightness in specific labour markets. All in all that is evidence of quite a tight labour market, in which one would normally expect to see costs increase, but of course what we care about is unit-wage costs, the statistic you cited. It is the mix of how much labour costs are going up balanced by how quickly productivity is going up. We have recently seen some improvement in productivity, which means that wage costs can go up faster before leading to inflationary pressures. That is something that we are very much watching closely, and movement is in the direction of a tightening labour market, building inflationary pressure and supporting a case in which we would need to be raising interest rates sooner rather than later.

However, the cost-price pressure to date is not yet sufficient to be consistent with inflation heading back to our 2% target. That is basically what we are focusing on, and when I was in front of you in September I laid out some of the statistics that I was closely watching, which we would be required to meet at least before I was comfortable voting for an increase in interest rates. That is the one criterion on which we have not made quite as much progress. Wage costs have been increasing, unit labour costs have been increasing, but they have not yet increased sufficiently to make me comfortable that inflation is yet heading back quickly enough towards our target.

**Q30 Helen Goodman:** Fine—that is a very clear and thorough explanation. I just want to ask you about whether you think different things are going on in different parts of the labour market, and I am slightly concerned about simply looking at the aggregate. The reason I am concerned about this, obviously, is that if you have got skill shortages, for example, at the higher end but not at the lower end, and we move to a situation where you decide to put up interest rates, we are using a great, heavy, clunking instrument when the real problem would be solved by doing something about increasing the number of people with high skills.

**Professor Forbes:** You hit on an important point, which we have been looking at. Wage gains have been quite different in different parts of the labour market, but it is not so clear that it is high skill versus low skill. For example, according to agents' reports, wage growth has been above 5% on an annual basis in sectors that account for about a quarter of employment in the UK. That is very rapid wage growth in sectors that account for about a quarter of employment in the UK, but it is not clear whether those sectors are directly related to whether jobs are high skill or low skill; it is just different sectors. Another data point that gets at that is that real wage growth is now stronger than it has been since the crisis, as the Governor said, and some of the strongest wage gains have been at the lower part of the income scale. There really is mixed data, and we do not fully understand all of those trends going on.

**Q31 Helen Goodman:** Did you see the survey done by the CIPD, which I think was published last week, which suggested that the difference was about skill level? They found that average applications for jobs in low-skilled roles were running at 25 per job but only eight for high-skilled jobs. You do not seem to have that picture. You seem to have a different picture.

**Professor Forbes:** I have not seen the specific data that you are citing right there.

**Q32 Helen Goodman:** Okay. Could we move on to hours, because we talked about hours last time, didn't we? Regarding the number of hours that people do work and the number of hours that people want to work, basically a gap had opened up in around 2008, and it has not really changed very much since. Again, you sent me some numbers, but I also did a little bit of research, because I asked the trade unions what was going on in these retailers. I found that some of the retailers are only employing 15% of their people full time. So, again, with this hours thing, have you disaggregated as between people in low skilled jobs, who may very much want to work more hours, and people in high skilled jobs, who

probably work far too much and would really rather prefer to cut their number of hours?

**Professor Forbes:** Yes, this gap has opened up between where we expected hours worked to be and where it is. This is something that we will be taking another look at. In our forecasts we try to do what we call stocktakes of labour supply, and how labour supply is expected to evolve, every few months so that we do not move this up and down every month with every data release, just because data is prone to revision and that will lead to very volatile estimates. This is something we will certainly be looking at.

Recently we have tried to look at this with some micro-level data at the Bank, and there are several different possible explanations for the fact that hours worked have been a bit lower than we expected. One is that some workers may want to work more hours, and they simply cannot get those hours at their current jobs. There is also some evidence—and some micro-data suggests that this has been important—that people are finally taking more vacations. They are more comfortable in their jobs and they are feeling more comfortable taking vacations and working fewer hours. Let me highlight: this is all very preliminary. It is based on some micro-data and we are not sure whether it will aggregate up and explain some of these more macro trends that we are seeing, but it does suggest that there are some very different explanations out there for this trend that we are seeing. That is what we are hopefully going to be digging into and getting more information on over the next month.

**Q33 Helen Goodman:** You said that wage growth has increased, and it has increased particularly at the lowest level. How do you reconcile that with the other thing that has increased, which is in-work poverty? Don't those seem to be contradictory to you? They do to me, but maybe they do not to you.

**Dr Carney:** Can I make a few comments, as you have raised a number of very important points? Let me go to the in-work poverty point. As you are no doubt aware we are still in a situation where real incomes are below pre-crisis levels.

**Helen Goodman:** Yes.

**Dr Carney:** You can measure it on a variety of metrics, but I would still say they are just a little less than eight percentage points below the levels in 2007-08. Part of the explanation, I am afraid, is there. There is certainly often an overlap for those households with still high levels of debt. Obviously, the cost of servicing that debt has come down because of the stance of monetary policy and the improvement in the financial system, but it is still a burden.

Let me make two other comments, if I may, in terms of desired hours and actual hours of work. As Professor Forbes indicated, this is an incredibly important point, and it is difficult to estimate with precision, but we are in the process of updating our understanding of this. In our February Inflation Report we will update our perspective on the gap between what people want to work and what they are actually working. Part of that gap is a product of changes in the labour market, as you are suggesting: more part-time work, zero-hour contracts and other factors. There is some evidence—and Dr Weale, another colleague on the MPC, as you know, has done some of this research—of a bit of a gap between desired hours and actual hours ultimately worked, so we need to quantify

that, but it is a source of slack in the labour market, without question. Our job is to try to determine how much slack that represents and what the implications are for inflation.

I have a last point on this question of skills mismatch. You rightly point to a medium-term imperative, which is to build skills. That is absolutely an imperative for the economy. Unfortunately for the conduct of monetary policy, we cannot do anything about building people's skills. We have to take those skills as given, and our horizon is short enough—two to three years—that we have to address mismatches if they exist. We have to conduct policy as we find the labour market.

**Q34 Helen Goodman:** In the world as it is, not in the world as we would like it to be.

**Dr Carney:** Not in the world we would like to have, or the world that Parliament and businesses and labour unions are working to develop. The last point, related to that, though, is a speech Mr Haldane made in the last few weeks highlighted some secular changes as a result of automation—the rise of robots, to put it in a simple form, but secular changes in the labour market that do have an impact in terms of hollowing out. That is a strong term, but it is reducing the proportion of medium-skilled jobs.

**Helen Goodman:** Changing the shape.

**Dr Carney:** Exactly, changing the shape, and the challenge is that those individuals quite often have to compete for lower skilled jobs, which puts downward pressure on or caps, if you will, wages at relatively lower skilled jobs because the speed at which they can upskill—if I can use that ungainly term—is limited, or the opportunity to upskill is limited. Again, as monetary policy authorities, we have to look at a secular trend like that and try to understand to what extent that is operating over our time horizon and what that therefore means for inflationary pressures. All of these points that you have raised are active points of interest for us in the conduct of monetary policy, quite apart from their broader societal implications.

**Q35 Helen Goodman:** Do you want to make any comment, Mr Haldane?

**Andy Haldane:** The Governor has described my speech much better than I could. He has captured a lot of the important points. The structural factors are important, but this could have a bearing on the nearer term as well. We have, as you know, been puzzled for a little while about wage growth and, given the strength in job creation that we have seen, why it is we have not seen a commensurate pickup in wage growth. Some of the explanation for that may be in some of these structural factors that the Governor referred to.

**Q36 Helen Goodman:** Do you think the fact we now have a large number of small employers rather than a smaller number of large employers is also one of the factors?

**Andy Haldane:** That is not an area that I have looked into in great depth, so I would not like to give you a definitive answer. I can see why, at least in principle, that could reduce

the bargaining power of labour in a way that may make it harder for wage increases to stick, but I say that without being remotely the expert on whether the evidence speaks to that being the case or not.

**Q37 Helen Goodman:** Professor Forbes, are you the expert on that?

**Professor Forbes:** Most certainly not.

**Q38 Helen Goodman:** Can I make a suggestion? You both very kindly showed us who you had been to talk to, and you have both been around the country and talked to various different groups. Could I also suggest that you have some conversations with the TUC, because they do get quite a lot of information about what is going on in the labour market, from a different perspective?

Finally, Professor Forbes, I just wanted to ask you about immigration. We had record net immigration in August, over 300,000, but I think we have got an age mismatch in the net figures, because the people who leave are a lot of old-aged pensioners going to retire in southern Europe, and the people who come are middle-aged people from eastern Europe and other places who want jobs. How much do you think that the cap on wages is caused by these big flows of people?

**Professor Forbes:** If I may direct you to the May Inflation Report, we have a whole box where we go into quite some detail on how, at the Bank of England, we treat our assumptions about changes, how immigration affects the supply of labour, and in terms how that affects the overall economy. That is the baseline scenario that we are still working with.

**Helen Goodman:** Okay, fine. Thank you.

**Q39 Chair:** Andy Haldane, I know that you like plotting long-term trends. By the way, we have one economist who works part time on the Bank of England, and I think that the MPC is supported by 150 economists, one way or another. There is a slight mismatch in access to data, but I have had back a very interesting graph, which I asked for, of the bank rate in the long run plotted against annual wage growth. These are pretty closely correlated. It does seem to me that the private sector wage rounds historically, certainly in an inflationary era, and most of our period of history since the war has been inflationary rather than deflationary, have run in parallel. They are not running in parallel now. Annual wage growth has been rising a lot—although you could argue that it has tailed off in the first part of this year—and is now out of line with the bank rate for the first time. You could argue that is because we are in these unique deflationary conditions, and therefore past performance is not a good indicator of future outcomes. I would just like you to comment on how strongly and carefully we need to keep monitoring annual wage growth in view of this very powerful historic connection.

**Andy Haldane:** Starting on the historical data first, we have tried—and indeed have succeeded—in making available almost all of the historical data that we possess. Indeed, we published more than 300 years of historical data earlier this year to make it available to

researchers, to enable them to plot charts the like of which you have seen. We have tried to make available all that we have, historically, and will continue to do that.

To your question, as you say perhaps it should come as no surprise that there has been that reasonably tight historical link between wage growth and bank rate, given that both are likely to be influenced by, as well as to influence, the rate of inflation. I guess that is the common denominator that would link the two. To your question of whether we are being vigilant on the wage growth side, we certainly are. To the Governor's point from earlier, the lion's share—perhaps four-fifths or so—of the reason why CPI inflation is as low as it is right now is because of external sources, but given that they will pass through the system in their impact on CPI inflation, what will then determine whether we get inflation back to its 2% target is ultimately the evolution of domestic costs and within that wages.

**Q40 Chair:** What about the deflationary point? In other words, how much thought has the Bank given to the possibility that this long-term link has been broken by this completely new type of challenge in the modern era?

*Andy Haldane:* It is certainly possible, and this goes back to our earlier conversation, that the equilibrium level of interest rates is somewhat lower than at times in the past, because of long-term structural forces, the like of which we mentioned.

**Q41 Chair:** But that is not saying anything about the relationship between the two necessarily.

*Andy Haldane:* Not necessarily. That might mean that on average bank rate both today and tomorrow settles at somewhat lower rates than we have seen historically. The possibility of structural change might mean that relationship is not quite the same as it has been in the past. Nonetheless, I would still expect the two to, on average, go up and down in lockstep, given that wages are a key component of the inflation picture and ultimately that will determine the equilibrium level of bank rate as well.

**Q42 Chair:** Alright. I just suggest that you might put one of your 150 economists on the job of taking a look at this

*Andy Haldane:* I am happy to.

**Chair:** The graphical relationship is extremely striking, as I thought it might be when I asked for it, and it certainly is.

**Q43 Wes Streeting:** On productivity, the MPC's collective judgment now is that productivity is going to slow to 1% in 2016 before picking up to 1.75% by 2018. Are any of you significantly more optimistic or pessimistic about that collective view in terms of the outlook for productivity growth, or is that a consistent view?

*Dr Carney:* Mr Streeting, as you know, as with all elements of our forecast it is a best collective judgment that is made by the committee, and there is a range of views on any

particular component and even just more broadly around the forecast. It is a key assumption in the forecast that there will be this mild deceleration in the rate of productivity growth before it picks back up again. I would say that it is an open question whether this will happen, given the repair in the financial sector that has happened, which had been one of the factors that had been holding back the recovery and productivity, given the investment intentions of businesses, which continue to hold up and we continue to see evidence of, and given the historic productivity performance of the UK economy and the gap between—if I can use this term—the level of productivity in the UK and best practice, or the so-called productivity frontier, which is still quite considerable. Certainly I would say that the risk to this assumption is to the upside, in other words that productivity growth could well be higher than we have assumed, and in that case it would imply, all else being equal, a bit more slack in the economy.

Of course, all else is not necessarily going to be equal. The discussion earlier about actual and desired hours suggests some risks in the other direction, and that is why we have to look at the supply of the economy in the round.

**Q44 Wes Streeting:** Even 1.75% is still well below the long-run average rate before the crisis. Looking beyond 2018, do any of you expect productivity growth to be permanently lower than its pre-crisis rate, i.e. is this a new normal for us?

**Dr Carney:** I will make a very quick introductory comment, which is that there was an element of pre-crisis productivity that was measured productivity in the financial sector, and also productivity in the extractive sectors, notably North Sea oil. Given a more sustainable and resilient development in the financial sector, you would expect to see less of that, because again—this is your speech day—I refer you to a speech of Andy’s from five or six years ago, which looked at how productivity is measured in the financial sector, a large component of which is just credit growth in effect. We are not looking for unsustainable levels of credit growth anymore in this economy, so one of the corollaries of that is lower measured productivity in finance. Obviously, despite the ingenuity of engineers in the North Sea, the level of production and therefore productivity is more likely than not to decline there. Those factors imply a slightly lower pace of productivity growth. Ultimately—I’ll stop here—the pace of productivity growth in this economy is not determined by monetary policy. It is helped by having a financial system that functions, but the real determinants are much broader than that and much more under the influence of Parliament.

**Q45 Wes Streeting:** Is that a consistent view? I just want to give everyone a chance to feed in as well.

**Dr Vlieghe:** I have two points on that. The first part is that I would not make too much of the near-term slowdown. Some mechanical assumptions went into that—bits of data that we already know about—that suggest there might be a near-term dip, but the key message is that we have recently seen an improvement in productivity growth, and by and large we expect that improvement to be maintained, and we might even over the next few years see some upside risk. I very much share the Governor’s view on that. As to whether we will get productivity growth back to very long-term averages, it is important to recognise that

we had seen a slowdown in many countries already before the crisis, so not all of the hit that we have seen is because of the financial sector, although the financial sector did clearly play a part. As to where we go in the next 10 years, luckily we do not have to have an accurate forecast for that in order to set monetary policy broadly correctly, but we have to be very modest about our ability to see that far into the future.

Actually, the more important thing is to be open to shifts, both up and down, in productivity growth, and react appropriately rather than thinking that we need to see it 10 years ahead, which is impossible.

**Q46 Wes Streeting:** In both of your responses, I detect a hint of optimism about productivity growth and the possibility that if there is variation from the forecast it could be on the upside, but over the past five years the MPC has been forecasting a sustained revival in productivity growth that has not yet materialised. Can you understand my cynicism? My planned question was, “What have you learnt from this period of over-optimism?” and I think the answer is that we have not.

**Dr Carney:** I would take slight issue with that, in that what we have taken from the serial disappointment in productivity growth has been to lower our productivity forecast quite materially. We have not notably revised that up, despite recent evidence that productivity growth has been picking up. We are waiting to see more evidence of the sustainability and broadening of that pickup before we put that into our forecast. I certainly agree with the comments of Dr Vlieghe in terms of the near-term wiggles, if you will, which reflect partially base effects and some other factors that we should not read too much into. I would just say that as a whole this is not an aggressive forecast for productivity in this inflation report.

**Q47 Wes Streeting:** Okay. Turning to a slightly different issue, in the August inflation report you noted that the overall drag on economic activity from the consolidation is uncertain. It will depend on factors such as the proportion of people who are credit constrained and therefore cannot smooth through changes in their income. Given that, to what extent do you think that changes in tax credits affect consumers who are credit constrained, and what, therefore, would be the macro effect of reducing tax credits? Just to be clear, I am not expecting you to go rogue and join the chorus of opposition to the Chancellor’s policy on tax credits. I am particularly interested in your remit and thinking through the macro-economic consequences of that decision.

**Dr Carney:** In terms of our remit, our consistent approach to fiscal policy decisions is to take those decisions that have been made as given and put them into our forecast, and to adjust the forecast and adjust monetary policy appropriately if necessary. We can wait another 24 hours to hear what the Chancellor has to say. Certainly there will be other budgets and fiscal announcements over the course of time. As soon as those are made, we incorporate those.

**Wes Streeting:** The decision on tax credits was taken.

**Dr Carney:** To be clear, yes.

**Q48 Wes Streeting:** What work has the Bank done so far on this? You must have done some analysis of the macro-economic impact.

**Dr Carney:** We look at the aggregate impact of fiscal consolidation on the economic outlook. Certainly the pace of fiscal consolidation is considerable, as it has been for a number of years, and it is one of the factors that influences the overall pace of domestic demand. We do note in the report, and comment in our minutes and the monetary policy summary, that domestic demand remains resilient despite the pace of fiscal consolidation. In other words, private domestic demand is quite robust in the United Kingdom at present, and we expect that to be sustained. It has to be, because there is fiscal consolidation and there is a very weak global environment. My short answer to your question is that we look at all of the measures of the overall stance of fiscal policy in setting our forecast. We do not do specific item-by-item macro-economic assessment; that is more the work of the OBR.

**Q49 Wes Streeting:** Okay. Just finally, thinking ahead to events here tomorrow, the MPC can give confidential advice to the Chancellor on fiscal policy ahead of a budget, and therefore I do not expect you to make public comments, but what I am interested in is whether the Chancellor has asked for your assistance before the spending review, as a resource he can turn to for advice?

**Dr Carney:** The conversations I have with the Chancellor tend to be with the Governor as opposed to with the committee as a whole. I think those conversations are best kept confidential.

**Q50 Wes Streeting:** Of course; I do not expect you to talk out of school. What I am interested in is whether the Chancellor ever asked the MPC for advice ahead of the spending review.

**Dr Carney:** In my time as Governor, I cannot recall an instance where he has asked the MPC for advice. I would take this opportunity to underscore that I have regular conversations with the Chancellor about a wide variety of economic subjects and stand ready to provide perspective as he or she, whoever is Chancellor, desires.

**Q51 Wes Streeting:** Does the Chancellor ask how the MPC might react to certain fiscal policy decisions?

**Dr Carney:** Again, I would—

**Chair:** Are you pleading the Fifth again?

**Dr Carney:** I am pleading the “neither confirm nor deny”.

**Wes Streeting:** Well, it was worth a try.

**Q52 Mark Garnier:** On that point about the relationship between fiscal policy and monetary policy, just to satisfy my own curiosity more than anything else, surely in order for the Governor to work with a clean mind, and for you to

work with a clean mind, you have to keep the whole thing separate. It would be wrong if you were trying to double-guess what the Chancellor was doing and vice versa the Chancellor trying to double guess what you were doing. Just as a matter of course, surely it would be the case that you would almost operate in your own silos, not necessarily with any reference to each other's policies.

**Dr Carney:** In general I would agree with that. Certainly I do not ask, and nor does the Chancellor offer, advice on the stance of monetary policy. It goes back to the start of our discussion today. As parliamentarians, you can appreciate that fiscal policy moves relatively slowly. There are proposals, there is debate in the House that must ultimately pass both Houses of Parliament, and the impact takes place over time. Monetary policy can be relatively nimble. We could meet as the MPC this afternoon, if need be, and change monetary policy, so in that regard we take fiscal policy as given, and we adjust monetary policy given those factors.

**Q53 Mark Garnier:** Yes, okay. Can I get back to what I really want to talk about, which is my pet subject of household resilience, household balance sheets and stuff? I would like to start with Andy Haldane, if I may. The MPC's collective judgment is that the household savings ratio is going to drop from 4.75% to 3% and continue to come down, and interestingly when you take out—this chart has been prepared by our clerk—pensions, the savings ratio is at about -2% or so. Does this give you any real cause for concern?

**Andy Haldane:** Your description of what is embodied in our November Inflation Report projections is right—that the recovery is underpinned by domestic demand, of which consumption is a significant component. As the mirror image of that, we do have the household saving ratio coming down somewhat to levels that look on the low side historically. Does that pose, as we say in the report, something of a risk that households may be less willing to run down those savings at a time when they are perhaps feeling uncertain about the environment? That must be a risk to the forecast. There have been some changes to the definition of the savings ratio, which complicates a bit the interpretation. If you look at an alternative measure that looks at, if you like, just the labour income and strips out the pensions component as a better metric for what—

**Q54 Mark Garnier:** Is that the one that is negative at the moment?

**Andy Haldane:** I am not sure quite which chart you are looking at.

**Q55 Mark Garnier:** As I said, this is one prepared by our staff. It has “saving as a proportion of post-tax income, excluding flows into employment-related pension schemes”.

**Andy Haldane:** The striking thing about that, and we do include a version of it in the inflation report by recollection, is that too is falling but to levels that look less exceptional historically. That gives some sort of comfort to us as a committee. The ONS definition that adds in pension income falls away somewhat more rapidly to levels that look historically low. The saving ratio measured relative to labour income looks less

anomalous relative to history, and that was one reason why we took away some comfort. But is it a risk? It is, and it is one that we have discussed in the report.

**Q56 Mark Garnier:** Of course, the other side of this is the debt ratio, and we have other interesting things going on with debt. Unsecured debt is rising—it is 8.2%—whilst secured debt is rising at a far lower level. Again, we have a reasonably strong economic recovery, but it is driven by consumer spending. Is the cost of an economic recovery overstretching household balance sheets?

**Andy Haldane:** Others on the committee will want to speak to this. Overall, in aggregate terms, we know that household balance sheets have been through a process of repair. We have gone from 155% or so debt ratio to 135% now. We have looked at that in some great detail on a disaggregated basis, household by household, to look at the loan-to-income multiples of different cohorts. There we have seen the extreme right-hand side tail of the debt distribution reduce somewhat. Those with, for example, loan-to-income multiples above five have come down very sharply over the past few years. It remains the case that there is a sizable cohort of households with debt-to-income multiples between three and four, and that has not moved very much.

Looking ahead, provided the growth in real wages we have seen over the past 12 months continues, that ought to be a source of some insurance. Of course, secure credit growth is still just 2%. That is still pretty subdued. Even unsecured credit growth of 8% is somewhat short of where it would have been pre-crisis, where it would have been comfortably into double digits.

**Mark Garnier:** It was about 18%, I think, in 1998.

**Andy Haldane:** Yes. The average pre-crisis would have been about 13% or 14%. I do not wish to say any of that to sound complacent, because unsecured debt—by which I mean not so much credit card debt but personal loans—is picking up at a rate of knots. We have seen the cost of those loans fall very significantly over the course of the last year or two. That would ultimately be an issue that the FPC might want to look at pretty closely, and I am sure it will. All I would say at a household level is that aggregate credit growth, both secured and unsecured, is not yet at levels that would cause us to say this is a debt-fuelled boom. That is not the way I would read the current numbers.

**Q57 Mark Garnier:** No, but the question is whether it could turn into a debt-fuelled boom, and one of the things that slightly worries me is that the housing market is going fairly ballistic again. This is probably an expression that economists would not use, but nonetheless it is going gangbusters, and one wonders whether people are feeling that their ability to borrow more, even if it is unsecured, rests on the fact that the value of the assets they hold is going up fairly substantially. Do you think we are beginning to start seeing the signs that we saw in the early 2000s, where confidence was being fuelled by the fact that, although incomes were not racing ahead, their net worth was going up because of the household value basis?

**Andy Haldane:** It is definitely something we want to keep a close eye on. The housing market has picked up, as the Governor mentioned earlier, during the course of this year,

having essentially flat-lined for a year. I would still say, though, that if you look at the level of mortgage approvals and the level of housing transactions, they are still no more than a half to two-thirds of what they were in the immediate pre-crisis period. Now, that may have been too high and it might be the wrong metric by which to keep score, but I do not see at the moment the housing market racing away. I see it picking up pace relatively steadily. Ultimately it is an issue, however, that the FPC will want to keep a close eye on, I think.

**Q58 Mark Garnier:** Are the FPC the ones who have got to keep an eye on the risks that are building up in the system?

**Dr Carney:** Yes. I should just say, with respect to the FPC, that I am in FPC purdah today, which limits my ability to comment on these things, but I agree that it is clearly an issue for the FPC as well as the MPC, yes.

**Q59 Mark Garnier:** Just stepping back specifically from the FPC, are we not finding ourselves in a bit of a perfect storm with households? We have got interest rates that mean that people who have and are perhaps relying on savings are having to spend down their savings, which is not necessarily helping the savings ratio. On top of that you have got the fact that, if you do save, you are getting pretty terrible returns on your savings if you are going for as risk-free a rate as you possibly can. At the same time the people at the other end of the economic spectrum—those people who are trying to get into the housing market—are suddenly finding they are having to borrow staggering amounts of money, if they can do that, in order to get onto the housing ladder. At the end of the day you are going to have this situation where you have these two elements pushing together to increase household debt. Discuss.

**Chair:** Not for too long, though.

**Mark Garnier:** Not for too long. I have one more question after that.

**Dr Carney:** Without question, one of the impacts and intended impacts of low interest rates is to encourage consumption and investment alongside in the present, in order to use up unused capacity, among other things. It does have the potential implication that savings have come down. If one looks at it slightly more positively in terms of consumer attitudes at present, consumer confidence is at its highest level—and there are various ways to measure it—since the crisis. Particularly based on various surveys and also on revealed behaviour, the sense to which individuals in the UK believe that now is a good time to make a major purchase, such as a car purchase or a major appliance, abstracting from the housing market, is at a quite high level as well. To some extent a reduction in the levels of the savings ratio is likely to be consistent with a higher degree of confidence in the resilience of the labour market, not just in terms of people's current jobs but their ability to move jobs and prospectively have higher wages.

Again, like Mr Haldane, I do not want to take any of that to suggest that we do not focus on these issues, as the MPC focus on the sustainability of the recovery and, as you suggest, these are also issues for the FPC to watch closely.

**Q60 Mark Garnier:** Sorry, just one last final question, which perhaps I will address to you, Mr Haldane. Just with this household gross-debt-to-income ratio that we were talking about earlier, the numbers from the OBR are just slightly different from yours, having peaked at just under 170% and then bottomed out at about 145%, I suppose, in 2014. What is interesting is that the OBR, although it is predicting this gross-debt-to-income ratio going back above 170% at some point in the future, interestingly has slowed down the rate at which it is growing. It was expecting that around mid-2019, and it is now looking closer to 2021. On the overall point, do you agree that this household-debt-to-income ratio is going to go back to pre-crisis levels and beyond and, secondly, do you agree with the OBR that that rate of growth is slowing?

**Andy Haldane:** I think that the latest update from the OBR did, as you say, revise down somewhat their projection for the household-debt-to-income ratio; I think it had a more rapid rate of ascent in previous forecasts. You should speak to them, but they have partly revised that down in response to a conversation we had with them about the differences between our projection and theirs.

**Q61 Mark Garnier:** You are the thought-leader, rather than the follower.

**Andy Haldane:** I would not say that. We had a conversation. Our own projections for the household debt ratio have it very gently gliding upwards from current levels, consistent with a gradual upwards adjustment in the housing market, mortgage approvals and transactions. The forecast probably ends somewhat below its high point.

**Dr Carney:** It is below the high point. If I can make a point—I think you know this but it is worthwhile emphasising—it is the very fact of the turnover in the housing stock. People who have owned their houses for a quarter of a century are selling to new homebuyers. Given the cumulative price appreciation that has happened over that period of time and given relatively low loan-to-value ratios on mortgages, this will mean that, on average, the debt stock relative to income goes up.

One of the important issues is not so much the pace of price growth in the housing market but the number of transactions in the housing market, as was mentioned. From memory, I believe some of the difference in pace between us and the OBR relates to the scale of activity in the housing market. At least in one variant, they had higher figures than us. Reasonable institutions—we are both reasonable institutions—can disagree about those factors and it can have a bigger impact.

**Q62 Mark Garnier:** It is interesting that you mentioned the turnover of stock. People are buying new houses but, of course, what they are also doing is buying huge amounts of debt. Of course, interest rates are very low. We have had discussions over a number of years about interest rates and rising interest rates. I completely accept that relative to the cost of a mortgage, which of course includes repayment as well as interest, a half-point or one-point rise in the interest rate, although it could mean the cost of your loan going up by 30%, nonetheless is a relatively small part of a mortgage repayment.

**Is it not the case, however, that repayment mortgages are now fantastically expensive, simply because you have so much money to repay over the years? Whilst I agree with you that people's debt is going up as a result of the fact people are having to buy these houses, doesn't it just put a huge long-term problem on the generation who are entering the housing market, who are essentially having to compensate those people who have done fantastically well over the last 30 or 40 years in terms of property price rises by taking out enormous debt? Households will inevitably become increasingly vulnerable.**

**Dr Carney:** Without question, more indebted households are more vulnerable. While the level of household debt has fallen notably over the course of the last five years, it is still at very elevated levels. We do not necessarily see it reducing further. In fact, as we have just been discussing, we can see it upticking—largely due to dynamics in the housing market. You are absolutely right: the pressure on households because of debt burden is significant.

**Q63 Mark Garnier:** Does thinking about this particular problem for households give you sleepless nights?

**Dr Carney:** Again, I am not speaking about the specific set of decisions the FPC has to take in the short term, but, as a general factor in terms of the orientation of the FPC, the concern is that, yes, there is less margin for error, given the weight of household debt that still exists in this country. We are very conscious of that at the FPC, and we are very conscious of that at the MPC in terms of the potential reaction of households to rises in interest rates. We do look at the different cohorts of households and who is credit-constrained, to use your term, and what the impact could be in terms of aggregate consumption when rates move.

Now, we supplement macro-analysis with survey analysis. There is a Bank NMG survey, the results of which will come out in the next two months or so. They are just being finalised. That looks at 6,000 households on the whole, which is a very representative sample of households, to see what their likely reaction is. First of all, it looks at where their vulnerabilities are, how much of their income they are spending on debt service, what they expect to happen to both their incomes and interest rates, how vulnerable they feel, and what the impact of rate adjustments could be on their consumption.

We feed that in to our modelling of the economy when we think about paths of rate increases. Obviously, at the point at which rates were to move, we would learn something about the actual reactions of households.

**Q64 George Kerevan:** Good afternoon. You have two monetary tools: bank rate and asset purchases. You suggest that bank rate is the active marginal tool at present, but you are still maintaining the £375 billion asset purchases. The first question is a technical one. With the presumption that a rate rise is more likely than a rate cut, and a rate rise is likely to come in small basis point increments, how do you make any bank rate rise effective in the markets against credit demand if you are simultaneously also topping up the asset purchases on a

monthly basis? That presumably means you are going into the market and purchasing.

**Dr Carney:** What we have done, and updated with this report, is to provide clear guidance on the stock of asset purchases. As you know, the MPC has been clear. We have said this in the past but we have reiterated it: we do see bank rate as the active marginal tool of monetary policy. We would not look to reduce the stock of purchased assets until we had bank rate at a position from which we could cut bank rate materially in order to provide stimulus, if that were required in the future.

We have put a number on that level now, which is two percentage points, as you know. What I would underscore is that what we are saying is that we will maintain the stock of assets. We are maintaining it at that £375 billion. Market participants can take that guidance and adjust their expectations. What will be relevant is the change in bank rate.

It is difficult to be precise about this, but some surveys of market participants—it is not clear that they have given a great deal of thought to this—implied that there was an expectation that we would begin to reduce the stock of asset purchases in a six- or nine-month horizon after we first moved bank rate, which was not the committee's intention. In discussing it, we felt it was better to give clear guidance.

In answer to your question, to be clear, movements in bank rate will influence—in our judgment and, certainly, my judgment—a host of other interest rates and asset prices in this economy.

**Q65 George Kerevan:** I understand that. I suppose I am asking why anybody would notice a quarter-point rise in the immediate short term if you are also continuing to top up the asset purchases to maintain your ceiling of £375 billion? Is this your expectation for interest-rates beyond that, in effect, or is it the actual quarter-point rise?

**Dr Carney:** It is the actual quarter-point rise. We happen to hold £375 billion of gilts. Prior to 2007-08, we held £40 billion or £50 billion or so of gilts on our balance sheet. It was a stock of gilts. The free float of gilts, if you will, i.e. those not held by the Bank of England, has increased over that period of the last six years from a little north of £500 billion to about £750 billion. That shows the free float, if I can use that term. That stock will continue to increase for some time, even though the overall ratio of gilts relative to GDP is expected to continue to fall. There are a variety of ways to cut it, but changing the cost of short-term money affects the cost of other interest rates and other assets—and it will continue to do so, regardless of what we are holding as a central bank.

Certainly, if we were raising interest rates and offsetting that somehow by purchasing additional assets, then there would be some cross-currents, but that is not what we are doing. We are talking about holding this stock constant.

**Q66 George Kerevan:** I appreciate that, but given that some of the gilts you are holding are being repaid and you are using the money coming in to buy more, you must make a judgment on what price you will pay for the gilts you are

going to buy to come back up to the £375 billion ceiling. Normally, I would expect you to be bidding up the market, which is the whole point of QE, in order to reduce interest rates. I am trying to work this out. If you are trying to raise bank rate and therefore raise interest rates, surely there is a contradiction there between what you are doing in maintaining QE and the £375 billion, and the market signals you are trying to give out with the bank rate.

**Dr Carney:** No, there is no contradiction. We are changing the price of short-term money. When we raise bank rate, we will increase the price of short-term money. That will tighten monetary conditions. We are not additionally changing the stock of assets.

To go to your expectations point, what we are doing with the guidance we provided here is encouraging or allowing the market to have quite firm expectations about the period of time over which that stock of assets will remain the same—in other words, at that £375 billion number. I would underscore that the materiality of that stock gradually diminishes with time in two regards. One, it becomes a smaller proportion of the overall number of gilts outstanding and, secondly, it becomes a smaller proportion of the economy as the economy grows over time.

**Q67 George Kerevan:** On the 2% trigger, when you start to materially bring down a round of QE, where did this 2% trigger come from?

**Dr Carney:** We had discussions as a committee on this. We looked at previous cycles of loosening of monetary policy. On average, since the Bank of England became independent, a loosening cycle was two percentage points. With that in mind, we could in theory conduct an entire loosening cycle using conventional monetary policy. In other words, we would not have to go back in to quantitative easing.

One of the things in terms of this approach—maybe I should underscore this—is that we were clearly saying that asset purchases are unconventional monetary policy and that we would prefer to be back in a boring world of conducting conventional monetary policy with movements of bank rate. As the economy progresses, as it is appropriate to tighten monetary policy—which I personally think will be appropriate—we will undertake limited and gradual rate increases until we will get bank rate to a point from which we could cut it if it became necessary to address a conventional economic cycle and we would not necessarily have to resort to unconventional policy.

**Q68 George Kerevan:** Given that QE is so unconventional and so unusual, and an ahistorical and atypical experience, yet you are looking at past policy cycles, when QE was not in existence, as your guide, you are saying 2% is the best guess, aren't you? It is not based on a historical experience, because we have not had QE before. I am not saying there is anything wrong with that. I am just querying whether there is a historical foundation.

**Dr Carney:** It has a historical foundation. It is realistic. Since the Bank has been independent, there have been five rate cycles. The tightening cycles have been 150 basis points, and the loosening cycles have been 200 basis points on average. The maximum

rate hike cycle has been 150 basis points. It does provide a fair bit of flexibility, relative to history, which is a reasonable guide.

**Q69 George Kerevan:** Are other members of the panel comfortable with the 2% as a trigger?

**Dr Vlieghe:** I want to paint you a picture that might help clarify both the first and the second part of your question. Imagine that we are driving the economy with two levers. Right now, both of them are pushing forward fast. On the QE lever, in our view, maintaining the stock of asset purchases is equivalent to leaving that lever in its position. If we were to allow the stock to run off and not replace maturing gilts, it would be like nudging that lever back slowly. When we are talking about pulling back on the interest rate lever, we want to leave the other one in place for a while. This is why they are not working at cross-purposes. We are only changing one when we are increasing interest rates and, initially, we are leaving the other one unchanged.

On your second point about where the 2% figure comes from and how it relates to history, you are right in that the levels of interest rates are not necessarily comparable to history, because there was no QE at the time, but we are making an argument about changes. How far do you need to move the lever when you confront a significant economic disappointment? We are still talking about moving that lever by two percentage points, regardless of whether the other one is in the forward position or in the neutral position. That is why I completely agree with the Governor's argument.

**Q70 George Kerevan:** I understand that. I am wondering why 2% becomes the magic figure. It may be the best guess in an uncertain world, because we clearly have not been there.

**Dr Vlieghe:** In past economic downturns, that is, on average, how much we have moved. Sometimes we have had to move by more; sometimes we have had to move by less. Giving us that space to move gives us some level of comfort that we will be able to move the interest rates while leaving the asset purchase programme on autopilot, so to speak, and not having to move two at the same time, which would mean it was both more difficult for us to estimate what we are actually doing to the economy and for people to understand what it is we are trying to achieve.

**Andy Haldane:** I am comfortable. It is around 2% rather than precisely. It is not a trigger. It is important. We will look at the state of the economy at the point we make any decision about the rate of run-off. This is helpful guidance—the Governor made this point—because some market participants' expectations seemed to be that we would start to run down that stock far sooner. That was not our expectation. Putting a number in place is hopefully helpful, but it is not a hard number. It is around that number, not bang on.

**Q71 George Kerevan:** That is very helpful. The next question is: we are approaching the 2% event horizon. You then have two levers you can use. You

can run down the stock of asset purchases quickly or not so quickly and you can move the bank rate. You now have two levers. Have you thought much about how you use them in tandem? The markets may be presuming that you will hit 2% or thereabouts and then you will pull back on asset purchases, but you have the option of doing a bit of both. How do you co-ordinate the two levers as you approach 2% bank rate?

**Dr Carney:** Mr Kerevan, I look forward to the day we have to address such higher order problems. We provide guidance. Mr Haldane has appropriately clarified the “around” point, but at this stage I do not feel the need to provide guidance on guidance, if you will. With limited and gradual rate increases, a period of time will pass and there will be other opportunities to appear before you to discuss this.

**Q72 George Kerevan:** Forgive me. I was not trying to force you into an extreme hypothetical discussion like we had with negative money. I have a sense there are elements within the market who think, as you approach 2%, we are suddenly going to have a major run-off of the stock of asset purchases, but it seems to me that you have much more leeway and you could leave a significant amount of the asset purchases in place and continue with bank rate rises. I asked the question mainly to test that issue.

**Dr Carney:** As we have said before—and I will reiterate—decisions around the asset purchase facility are the responsibility of the MPC, but we would and do consult with the Debt Management Office. We have regular conversations with them even now in terms of potential impact of non-reinvestment or asset sales. We would obviously intensify those conversations and consultations as interest rates began to increase, consistent with the guidance given here.

**Q73 Chair:** Dr Vlieghe, would you agree that, while QE had a lot of beneficial effects, it also was quite distortive in the economy in ways that interest rates are not?

**Dr Vlieghe:** That is not obvious. It provides stimulus to the economy.

**Q74 Chair:** Across a spectrum of assets, it is widely held to have generated differential variations in prices that would not have occurred had we been using an interest-rate tool in normal conditions.

**Dr Vlieghe:** Yes, it provides stimulus to the economy through a different channel from just purely short-term interest rates.

**Q75 Chair:** It has left behind a different pattern of prices of assets, among other things.

**Dr Vlieghe:** That is possible, but it is important to emphasise that—

**Q76 Chair:** To be clear, are you saying it has not?

**Dr Vlieghe:** No, what I would like to emphasise is that, at the beginning, when QE and asset purchases were first started, we were trying to offset an unwarranted tightening in financial conditions. You could say it distorts, but really it was the tightening that was the distortion, and we were trying to offset it by restoring the economy back to normal.

That is why I hesitate to use the word “distortion” here. We were trying to put stimulus into the economy by encouraging people to buy riskier assets than they would if we were not doing asset purchases.

**Q77 Chair:** Governor, the Bank has made clear that it wants to hold a bigger balance sheet for liquidity purposes. At the end of this process that George Kerevan has been cross-examining you on, how big will the balance sheet be?

**Dr Carney:** I do not have a precise answer for that. There are two aspects of it. The first is about backing notes in circulation with gilts. Prior to the crisis, the Bank was in a process of gradually increasing the proportion of gilts it held so that notes in circulation were backed by gilts. That is one block. We would be very likely to take a decision to finish that or have that as one of the components of it.

The second issue is that the demand for liquid reserves has obviously gone up in the banking system. Satisfying that through central bank reserves and those being backed by gilts would be appropriate as well. It would be considerably less than £375 billion, though, so there will be the questions—

**Chair:** Giving this Committee in due course some order of magnitude for that—I am not talking about the precise figure but a proportion—would be helpful. In due course, we would be grateful if you could provide us with that.

**Dr Carney:** Yes, of course.

**Q78 Helen Goodman:** Professor Forbes, when I asked you about the impact of immigration on the labour market, you referred me back to a box in the bulletin in May. Of course, in May, we were all engaged in the General Election, which is why I missed it. For our benefit and the benefit of anybody who might be watching this hearing, could you briefly explain what the approach is?

**Professor Forbes:** Our general approach for migration is obviously that the amount of migration allowed in an economy is a political decision. It is not the decision of the Monetary Policy Committee—and it is especially not my decision as an American on the Monetary Policy Committee.

**Helen Goodman:** I am not asking you for your view on it; I am asking you what you think the impact is on the labour market.

**Professor Forbes:** Our approach is to make the best prediction we can of the amount of migration that will occur. Our main analysis focuses on how that changes the supply of labour in the economy and how an increased supply of labour in the economy can increase potential growth in the economy and, in turn, how that will affect inflation and growth in the broader economy.

**Dr Carney:** May I supplement that? That is our approach. The box in May—we will circulate it to the Committee so you do not have to go back to the archives—looks at a generic increase in labour supply, if you will. For example, there might be an increase in labour supply of 150,000 heads of new workers, who come in to the labour market. For these purposes, let us say those new workers are all migrants, so this is net migration.

From memory, that would imply an increase in net migration of 180,000, because about 80% of migrants end up working in the economy. We do a simulation of, if you have that increase in labour supply, what happens to GDP, wages and inflation. We do this all without a monetary policy response, which is, in some respects, an unrealistic exercise. We have increased the potential supply of the economy, so to speak, by having 150,000 more able-bodied workers instantly. That is the experiment we do.

The net impact on GDP is about 0.15 percentage points over the course of the period. The net impact on inflation is quite marginal. It is 0.1 percentage point on prices over that period. Of course, even though we have a notable increase in the number of workers, the reason there is not a bigger disinflationary impact of that is those individuals come, they work, they get paid and they spend that money. There is a demand offset, by and large. In that case, there is a net positive impact on GDP. Again, this is speaking in generic terms. This is not migration per se, but there is a net positive impact on GDP from having more workers. There is a mild reduction in the rate of inflation. We would take a judgment, in that case, given all other factors, whether or not it warranted a monetary policy response on the margin in order to have inflation back at target.

That gives a sense of the simulation. We will make sure we circulate the analysis to the Committee.

**Q79 Chair:** Dr Vlieghe, you are relatively new to this game compared with a couple of old hands to your immediate right. I have a couple of other questions before we draw towards the close, but I wanted to ask whether you came here with anything you particularly wanted to put on the record and have not yet had an opportunity to. Please take it now.

**Dr Vlieghe:** No, I have been very happy with how things have evolved in the first few months. I have all the analytical support I need at the Bank, and there are no issues to report.

**Q80 Chair:** Professor Forbes, further to a question from Helen Goodman, have you done any work of your own on what wages and employment would look like if the Government succeeded in delivering its target of 100,000 people a year for immigration?

**Professor Forbes:** There are a number of issues I have done quite a bit of work on in independent analysis for the Bank, and that is not one of them.

**Q81 Chair:** Would you like to take a look at it? It might be an interesting question.

**Professor Forbes:** I will perhaps take a look at it when my term on the Monetary Policy Committee is finished, given the political sensitivity around this.

**Chair:** We might come back to you before then, Professor Forbes, since you are one of the leading experts in this and related fields. This is a very relevant question, and quite relevant to the point Helen Goodman was raising earlier.

**Professor Forbes:** I will add one comment. Although I have not done any independent work, I have read the academic literature quite in depth on these issues. I have noticed one thing. There is an old joke: if you put two economists in a room, you will get three answers.

**Chair:** We would like to put one economist in a room and see whether we can get one answer back—and that would be from you, Professor Forbes. Perhaps you could come back to us in due course.

**Professor Forbes:** On migration, it is even harder to get any agreement. I went to a panel not that long ago focused just on migration, and there are tremendous challenges in getting concrete answers on exactly the types of questions you are interested in.

**Q82 Chair:** We would be grateful if you would have a go. We are going to come back to you, so we look forward to receiving something. Thank you very much for agreeing so readily to this piece of work. Andy Haldane, is Chris Giles right when he says that “the MPC needs to take seriously the view of its Chief Economist Andy Haldane that interest rates even at 0.5 per cent are providing little economic stimulus”?

**Andy Haldane:** I do not recall saying that.

**Chair:** No. I do not recall seeing you say that. Chris Giles is a first-rate economist. The reason I raise it is that a number of your answers this morning have not been consistent with that summary of your view.

**Andy Haldane:** No, the reason is that the statement you read out is not really my view. What I would say—Mr Baker raised this point earlier on—is that there is a question around how we interpret where monetary conditions are right now. I think you used the word “accommodative”. We need to be a bit careful. The low level of bank rate is very low by any historical metric. Is it significantly accommodative? We need to be a bit cautious about that.

We have an economy that is growing at around trend. If we thought rates were significantly below some equilibrium level, we would expect an economy to be growing

above trend and rising. We now have an economy that is growing at trend and, if anything, slowing down a touch. If monetary policy is very accommodative, you would expect pricing pressures to be picking up at a rate of knots. There is not a huge amount of evidence of pricing pressures picking up very significantly.

**Chair:** There is the wage round, which I referred you to.

**Andy Haldane:** There is the wage round. That would be one sign on the domestic side of things picking up. It comes against a backcloth of wages having undershot for several years before that. You made the point yourself, Chair, that there is evidence, moving into the third quarter, of some of that pickup having fizzled out somewhat.

**Chair:** It has come off a bit.

**Andy Haldane:** That may change. We may see wage growth pick up into next year, but for now, at least, I do not see this as an economy where monetary conditions are overly loose, given the state of growth.

**Q83 Chair:** I wanted clarity on this narrower point I alluded to a moment ago. We have this run-down of savings taking place; we have this massive price inflation in the housing market. We have an increase in personal loans. It seems to me that while, as you put it, we do not yet have a debt-fuelled boom, would you not agree a lot of that has to do with 0.5% interest rates? Some economic activity is certainly being generated on the back of those lower savings and personal loans.

**Andy Haldane:** It is absolutely true to say that the reason a large majority of the committee have continued to vote for rates remaining at the level of 0.5% is to support domestic demand.

**Q84 Chair:** The point I am trying to get at is this: are we pushing at a piece of string, in the old Keynesian analogy, or is this 0.5% still accommodative and having some of the stimulatory effects you have been seeking?

**Andy Haldane:** If you were to ask me the question, “If rates were to tighten, would that have a dampening effect on activity?” my answer to that would plainly be, “Yes.” In that sense, monetary policy is providing support to domestic demand.

**Chair:** *I am asking you about where it is.*

**Andy Haldane:** It is providing support to domestic demand in particular, which the economy needs, given the external headwinds. Without that support, we could see growth ticking below trend and price pressures domestically weakening. Yes, it is providing support.

**Q85 Chair:** I began the hearing with you, Governor, making clear how important it is for this Committee that you maintain your independence. I should clarify that we would expect you to come to us privately—and, if necessary,

publicly—were you to feel that any undue pressure were being brought. I am sure I scarcely need you to agree with that, but it is very important that we have that on the record for all these bodies to whom very considerable powers have been delegated.

I would like to pick up on a few other points we have heard today. It is clear that people are not excluding that the first tightening could come via the FPC around the table via the countercyclical buffer, which I picked up early on in the hearing.

Quite reasonably, Dr Vlieghe, you were adamant that it is not for you to challenge or interfere with their remit. Andy Haldane, you pointed out that policy may, at various times, pull in contrary directions between the FPC and the MPC. You, Governor, reminded us that there are periodic meetings between the FPC and the MPC. Are minutes kept? Would summary minutes be of value for public consumption?

**Dr Carney:** From the MPC's perspective, the discussions we have with the FPC are minuted. Let me give you an example. One of the recent issues, to which Professor Forbes referred, was risks around the current account, which are of interest to both committees. Within the last three months—it was probably the September MPC minutes—we reflected our discussion as the MPC of that. As you are aware, we produce a record for the FPC.

We do not produce minutes per se, but the record is a faithful record of the breadth of the discussion with the FPC. Yes, everything relevant from the MPC's perspective from that analysis, as it pertains to monetary policy, is included.

**Q86 Chair:** There is no separate record kept of non-MPC relevant points for the FPC.

**Dr Carney:** They would be reflected in the FPC record, yes.

**Chair:** There are two separate records kept of this meeting.

**Dr Carney:** Yes. However, if I may, Chair—

**Chair:** My suggestion might be that you take a look at whether you can consolidate something and put it in the public domain, albeit perhaps with the need with some redactions, quite understandably—not least because the timing of these meetings analysis be inconvenient for the MPC transparency process. The FPC may also have things they would rather keep completely private. Would you agree to take a look at that and come back to us?

**Dr Carney:** I will keep it simple: we will take a look at that, yes.

**Chair:** Thank you. That is what we like to hear. We are very grateful to you for coming to give evidence today. It is now the afternoon. We have commissioned a few things and we look forward to seeing you again before long.

**Dr Carney:** Thank you.

