



Treasury Committee

Oral evidence: Bank of England August 2014 Inflation Report, HC 636

Wednesday 10 September 2014

Ordered by the House of Commons to be published on Wednesday 10 September 2014

Written evidence from witnesses:

- [Mark Carney, Governor, Bank of England – Annual Report to the Treasury Committee](#)
- [Professor David Miles, member, Monetary Policy Committee – Annual Report to the Treasury Committee](#)

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Members present: Mr Andrew Tyrie (Chair), Steve Baker, Mark Garnier, Stewart Hosie, Mr Andrew Love, John Mann, Jesse Norman, Mr David Ruffley.

Questions 1–116

Witnesses: **Dr Mark Carney**, Governor, Bank of England, **Dr Nemat Shafik**, Deputy Governor, Markets and Banking, Bank of England, **Dr Martin Weale**, Monetary Policy Committee member, Bank of England, and **Professor David Miles**, Monetary Policy Committee member, Bank of England, gave evidence.

Q1 Chair: Thank you very much, all four of you, for coming to give evidence to us this afternoon. We have a lot to get through. I would like to start with Scotland, which is particularly topical given your remarks yesterday, Governor. Of course, in a sense, you are speaking not just as the Governor. You are also speaking as someone who has been here before with the Quebec experience from Canada. In that sense, you are uniquely well placed to comment on all this and so, bad luck, we are going to persist a little today with some questions on this because I think you are very well placed to tell us how it is and what this means. You came before us in March to discuss currency unions and you said then that that would require very stringent controls on tax and spend and would result in a loss of domestic control for an independent Scotland and some loss of sovereignty. I do not want to discuss that option today; in any case, the major parties have taken it off the table. What I would like to address is a number of the other possibilities that have been raised. Could you perhaps begin by giving an explanation of what you see as the major issues involved in sterlingisation?

Dr Carney: Thank you, Chair. Let me first acknowledge what we all know. This is a particularly sensitive time and obviously we have a responsibility to give our testimony. I am quite intent on limiting my testimony to testimony consistent with previous evidence. As you said, we had quite an extensive discussion in March. Now, I am not sure everyone paid as close attention to the discussion in March as the members of the Committee.

Chair: I think they are listening now, Governor.

Dr Carney: They may be listening slightly more carefully. Mr Norman, Mr McFadden, Mr Hosie, yourself and others asked questions around this issue. Let us take sterlingisation, which I will define as unilateral adoption of sterling. I am speaking in general terms, so unilateral adoption of someone else's currency. There are not those institutional structures that might be in place as part of a currency union. There is not a formal banking union. There is not a common central bank. There are not any fiscal arrangements in place. What is required to maximise the prospects for sterlingisation. I will use the term "sterlingisation" but I am speaking generally for sterlingisation or dollarisation. The first thing, similarly with a currency union, is having similar economic structures, similar business cycles; something that would mean that, for the country that is unilaterally adopting someone else's currency, monetary policy would likely be, most times, consistent with the requirements of that country, so there would not be that tension. Consistent with that, it would be in the interests of the country adopting that they maintain free flow of capital, goods, services and people across the common borders, which also helps smooth out fluctuations.

What else would be required is a question of degree. Our institutional buttresses for the financial system of the country that is adopting the other's currency, in this case an independent Scotland adopting sterling, those institutional structures that we discussed include a credible lender of last resort, a central bank, and, secondly, a credible deposit insurance scheme.

I will say that the credibility of those institutions is in part a function of the credibility of the fiscal credibility of the country because deposit guarantee schemes are never fully funded. They rely ultimately on the fiscal resources and central banks, including in the United Kingdom, often rely on the fiscal resources of the country itself. For example, as you know as Chair of this Committee, if there is ELA required, that is a joint decision with the Treasury and the chair of the TSC is informed. There need to be fiscal resources in there. It is the credibility of the fiscal resources, the credibility of those institutions, and that is also a function of the relative size of the financial sector relative to the size of the underlying economy, the fiscal resources.

The third broad element that is often required is the prudential standards for the financial institutions in the country, so the capital requirements and liquidity requirements. One can look at various examples. There tend to be much higher capital requirements and higher liquidity requirements in reality, not just requirements but on the actual balance sheets of the banks, in the country that has adopted someone else's currency unilaterally.

Maybe the last point I will make is that these are always questions of degree and there are various examples around the world of this. The extent to which the supports need to be put in place, reinforced, built up, is in part a function of the similarity of the economies. It is in part the function of the sophistication of the financial system. It is also a function of the

extent to which that financial system is cross border. Finally, it is a function of the extent to which the adoption of someone else's currency, and we did have this discussion in March, is whether that adopting is part of a process of convergence or divergence, because that again goes to the question of the longer term credibility of the arrangement.

Q2 Chair: Just on that last, the eurozone is part of a process of convergence.

Dr Carney: Yes.

Q3 Chair: How would you characterise likely sterlingisation of the UK dividing into two countries?

Dr Carney: Well, I would say there are economic criteria of convergence in the eurozone. There are also political criteria of convergence. It is not for me to comment on the political.

Chair: I am asking about the financial.

Dr Carney: On the economic, obviously the economies of Scotland and the rest of the UK are highly integrated.

Chair: At the moment.

Dr Carney: There is fairly strong convergence, although, as I outlined in my speech in January on this subject in terms of the dispersion of the industries in Scotland, it is more towards the Canadian end of the spectrum, which is more dispersed than it is towards the European end of the spectrum, which is more similar. The question is what happens over time. Do those differences build up over time? There is some evidence that once you put borders in place they build up over time.

Q4 Chair: Is there any evidence that there is convergence if you put borders in place?

Dr Carney: Well, I hesitate to speculate on events after.

Chair: I think we can assume that there will be divergence, can't we, Governor? How much is a matter of speculation, but there will be divergence.

Dr Carney: I think it is fair to say that the question before the Scottish people by design has an element of divergence, yes.

Q5 Chair: Can I take you through each of these areas in turn briefly? The lender of last resort problem, how might that resolve itself? This is the question. When a financial institution gets into trouble, in the event of a crisis where you deem that there is contagion risk, is there a mechanism for bailing it out and, if so, how is that accomplished?

Dr Carney: The lender of last resort, as in the case of the United Kingdom, virtually the case everywhere, is the central bank. The credibility of that role relies on the strength of the balance sheet of that central bank. That can be a function of the capitalisation of the central bank. It normally is also a function of access to other capital resources. That can be the right to get seigniorage from the currency; that is future income. We do not have that here and I presume I am not going to be given time to make the case for seigniorage today, Chairman, but it can be a function of that.

Q6 Chair: For those who are listening who may be slightly confused, this is the Bank of England wanting to pocket some money.

Dr Carney: On behalf of the people of the United Kingdom, for their benefit.

Chair: Yes, but do carry on, Governor. I am just doing a bit of translation.

Dr Carney: Obviously, you do not get access to seigniorage on someone else's currency by definition. That is not an option in the case of the unilateral adopter. The second way to support the balance sheet, obviously, is through capital. That is expensive. That is an investment. It is a fiscal cost. The third way is to provide some sort of indemnity or backstop, which is the way things work in the United Kingdom, which is a contingent responsibility of the Government and, therefore, is a fiscal role.

The lender of last resort is centred around the central bank, but just having a central bank is not, by definition, a credible lender of last resort if that central bank is not the issuer of the currency. It needs to be backed up. It needs to be backed up in any event by fiscal resources, but particularly, and I will stop with this, if it is the currency of another jurisdiction those resources need to include access to that foreign currency, so some form of reserves in that foreign currency that are readily available.

Q7 Chair: After all, we are here talking about using someone else's currency and then trying to accumulate reserves of a sufficient scale to give you credibility to be able to run a lender of last resort operation if the need arose. Is that correct?

Dr Carney: It is correct that the reserves need to be sufficient—

Chair: There will be currency risks.

Dr Carney: —and seen to be sufficient for lender of last resort, but also to back the credibility of the notes in circulation. Either they back one to one the actual notes in circulation, which would be sterling, or not just the notes in circulation but broader money, so either demand deposits or term deposits or other aspects of broader money that would be denominated in sterling. Again, it is a function of an overall set of structures how credibly that broader money is backed in sterling, a foreign currency. That requires a certain amount of reserves and the size of those reserves relative to GDP, relative to deposits, relative to broader money, have to increase the bigger the challenges are to that backing.

Q8 Chair: We have some empirical experience here. Give us an idea of those numbers. You have just cited three: reserves to deposits, reserves to GDP, and I think broad money was the third one you came out with.

Dr Carney: Yes. I might ask, given the sensitivity and the precision around this, to be allowed to submit robust numbers, if I may, but I will bring it back to a discussion we did have—

Q9 Chair: I am not holding you to particular numbers. I am just trying to get a ballpark sense of the numbers here so we can carry on the discussion today. What kind of scale of reserves might be required given the size which is very large in relation to GDP, of the Scottish financial system, to provide a lender of last resort facility and something that can give credibility to deposit insurance and also provide that extra capital cover you said might be required for the banks at the prudential level?

Dr Carney: To take the entire range, there is a range to which I would not subscribe but would be just backing notes in circulation. Notes in circulation in Scotland are backed one to one by Bank of England notes. I would make this point, given that people may be focusing on this. The notes in Scotland that circulate issued by the banks today are backed by the Bank of England and that will continue.

When you move to more broad sterling assets, deposits at the Bank, which are not notes in circulation, term deposits, short-term deposits, demand deposits, when you look at other countries, the Baltic States, for example, as they were in a process of convergence with the eurozone, the orders of magnitude of reserves, helped by the IMF and others, would be on the order of about 25% of GDP.

As the degree of sophistication of the financial system increases, the cross-border element of the financial system increases, the ratio of financial system assets or liabilities, which is relevant for central banking, to GDP goes up. The amount of those reserves goes up as well, and we had a discussion here in March about Hong Kong where you have a sophisticated financial system, large cross-border activity, large relative to GDP, and a longer-term process of divergence with their currency of choice. They peg to the US dollar but obviously, with the rise of China, the internationalisation of the RMB, one would expect that over time that is a more natural relationship. Hong Kong's reserves, a little more than US\$300 billion: from memory that is 110% or 120% of Hong Kong GDP.

You move along the spectrum. I refer back to my answer at the start, which is that it is about the credibility of the institutions that back the unilateral adoption. That goes to fiscal. It also goes to the size and sophistication of the financial system and those dynamics might need changing.

Q10 Chair: Let us tackle each of those in turn, just briefly. You have given some idea of the scale of the reserves that would be required, which is particularly large if you have a large financial sector. How might one accumulate those? Let us take the Scottish case. What kind of reserves do you think they are likely to inherit were they to opt for separation in the referendum?

Dr Carney: Recognising the sensitivity of the time; recognising the political decisions and the political discussions and negotiations are quite rightly in the political realm. Let me just observe a few facts without comment on—

Q11 Chair: I am only asking you for the facts and I will try to resist colleagues' attempts to get you to do something that you feel would be inappropriate as Governor in this area.

Dr Carney: As I referenced earlier, the notes in circulation, the physical bank notes that people in Scotland and we use when we are in Scotland, are backed one to one with assets with the Bank of England. In effect, they are backed by the Bank of England. Order of magnitude of that is a little more than £5 billion of reserves. You can look at that as a pool. A subject for negotiation, and I make no comment on it would be the division of the debt and the division of the reserves of the United Kingdom, which would include potentially reserves at the Bank of England. There is about £6 billion of reserves at the Bank of England. The question is how much of that would be apportioned. There is a little more than £60 billion sterling equivalent of reserves at Her Majesty's Treasury.

Q12 Chair: That is another £5 billion or £6 billion. If one does it on a population or a GDP basis you get to roughly the same answer.

Dr Carney: Yes, order of magnitude, yes.

Q13 Chair: We are getting, what, to a number of about £15 billion, are we?

Dr Carney: Well, that would be a higher number, yes.

Chair: I am just totting up the upper end of the numbers you have given me, I think.

Dr Carney: That would be the upper end of the range, yes. I will make the general point that it is reasonable to expect that countries adopting currency would have to build reserves by running—and these are fiscal costs, so you have to borrow to build these reserves and it is real money.

Q14 Chair: It is real money. It has to come from somewhere.

Dr Carney: Further, in effect, you have to run a balance of payments surplus in order to build—

Chair: A budget surplus.

Dr Carney: Also a balance of payments surplus in order to ... the net of your current account balance and capital account balance.

Q15 Chair: But you have to run both, do you not, to do this?

Dr Carney: You have to have both to sustainably build, yes.

Q16 Chair: If we just concentrate on the budget surplus, what we are talking about here is higher taxes or cuts in spending, are we not?

Dr Carney: I make no comment on the fiscal stance.

Chair: Because the borrowing side is very tricky.

Dr Carney: It is a question of priorities for the Government.

Q17 Chair: Yes, but I just want clarification. That triangle that makes up fiscal policy, you either have to put taxes up or you have to cut spending to find this budget surplus, do you not?

Dr Carney: You have to make decisions about the priorities consistent with the currency arrangement you wish to adopt unilaterally.

Q18 Chair: What do you think the prospects would be for borrowing from markets to obtain the necessary capital, these reserves that are going to be required? I think we have concluded that the reserves are not there at the minute in anything like the numbers required. Maybe we ought to throw in one extra number. Roughly, what would you estimate the assets in the Scottish financial sector to be?

Dr Carney: Well, broad-brush, assets in the Scottish-domiciled entities are about 10 times Scottish GDP.

Q19 Chair: Which is in absolute terms?

Dr Carney: It would be north of £1 trillion sterling.

Q20 Chair: About a trillion. We have £1 trillion sterling and we have what in reserves at the moment? You did not like my 15. You thought it was a bit high.

Dr Carney: Well, we are speaking in counterfactual terms about—

Q21 Chair: What ratio are we getting to here of bank deposits to reserves for Scotland at the start?

Dr Carney: The deposits of Scottish-domiciled banks, and the vast majority of those deposits would be deposits in the rest of the UK, are a little less than £800 billion at the moment. The judgment, depending on other institutional arrangements that might be put in place, fiscal credibility would be what is the relevant size of reserves that would need to be built up to be consistent with the responsibilities of an independent Scotland as lender of last resort and as a backstop for the deposit guarantee scheme. Now, there is a question of the circulation of broader money in Scotland and the backing of broader money in Scotland, which is less than that, but the credibility of the backstops would have to be established.

I would, though, if I may, refer back to my testimony in March where a number of members asked about the potential dynamics and the responsibilities about Scotland, the rest of the UK and, very importantly, the financial institutions themselves in the event of independence and in the event, and it is a joint probability, of Scotland remaining a member of the EU or the EEA because there are responsibilities under the so-called CRD IV BCCI directive about potential re-domiciling of institutions. That dynamic may come into play. I am not trying to be obtuse about it. It is complicated but it is there.

In terms of orders of magnitude, I would refer back to the broad-brush examples that roughly a quarter of GDP, it is sometimes easier to look at GDP—

Q22 Chair: Is required?

Dr Carney: Countries, process of convergence, relatively younger financial sectors, less cross border; up to above 100% of GDP for bigger financial sectors relative to the economy, processes of divergence, large cross-border activity.

Chair: Is required in order to—

Dr Carney: I would say “are held”. When I say “are held”, those are discrete decisions of—

Chair: In practice, this is decisions they have taken?

Dr Carney: Yes.

Q23 Chair: That is what they have in order to deal with the lender of last resort problem and the deposit guarantee problem and the need to provide capital to underpin their financial institutions. Is that correct? It would be helpful if you could just say whether—

Dr Carney: I would generalise it to fully ensure the credibility of the adoption.

Chair: Also to bring adequate credibility to the system?

Dr Carney: Yes, and ensure that credit flows freely and effectively.

Q24 Chair: What is that ratio in Scotland at the moment?

Dr Carney: Well, I am not going to make a judgment about what that would be. I cannot say at the moment because obviously Scotland does not have reserves. I am not making a calculation.

Q25 Chair: Well, to be fair, I was asking you for numbers and then totting them up. We got to something south of 15.

Dr Carney: The Scottish GDP, £106 billion; you can make a judgment.

Q26 Chair: That ratio looks to be rather different from 25%. I cannot work it out off the top of my head, but it is a lot less than 25%. It is a very low multiple. Perhaps after this meeting you could send us a piece of paper with those two sets of numbers backed by some examples, just factual numbers. Would that be possible?

Dr Carney: It is certainly possible. We will send the numbers that are factual on other countries and remind the Committee of what they know, the size of the Scottish economy. I do not think it would be appropriate for us to make any assumption about the apportionment of existing reserves.

Chair: I understand.

Dr Carney: If I may just reemphasise the final point for those who are not following the technicalities of this, and these are important technicalities, in terms of Scottish notes in circulation, they are backed and will continue to be backed through the end of the transition period, if there is one.

Q27 Chair: We are not talking here about the transition arrangements.

Dr Carney: No.

Chair: I take it we are both having an exchange about what the state of play will be at the end of the transition arrangements.

Dr Carney: That is very much so. Maybe I should just take this opportunity. As you well know, the Bank of England has a range of responsibilities for financial stability. We are not solely responsible but we have a range of responsibilities, including lender of last resort and other aspects. Those responsibilities would continue through a transition period. The question is what happens beyond the transition period if that were to come to pass. That is what we have been discussing, so I will just re-emphasise that point. We are not talking about the short term. We are talking about the medium term.

Q28 Chair: I understand, the new arrangements in the longer term. Can I just clarify one other point? In fact, I have more than one I want to clarify, but just on this accumulation of reserves point, you said, and I think we both agreed, Scotland would need to run a current account and a balance of payments surplus and a budget surplus in order to start accumulating the necessary reserves. They could borrow from markets. Are there any other options open to them? Might they do, for example, what a large number of countries have done who have found themselves as new countries, and which Dr Shafik will have a lot of practical experience of but I will keep the questioning with you for the time being, Governor, which is to ask the IMF for some support?

Dr Carney: I would not presume to advise a hypothetical independent Scottish Government on how they would find the resources, but there are market resources. There are multilateral resources. I think the core point is ultimately borrowing from whoever is a transition. It is a smoothing mechanism. These are real fiscal responsibilities and real fiscal costs. Ultimately, it is about the underlying resources of the state that has adopted another currency and the credibility of those underlying resources in backing that decision

through the financial system because of the responsibilities that they take on, not limited to lender of last resort and deposit guarantee.

Q29 Chair: There is an alternative to accumulating reserves, at least to deal with part of the problem, which is a large financial sector, that you have touched on very briefly, which is that the financial sector migrates to obtain lender of last resort cover somewhere else, isn't there?

Dr Carney: Well, the extent to which the financial sector redomiciles, migrates, the scale of what is required correspondingly reduces, yes.

Q30 Chair: With that comes a loss of foreign exchange earnings and, therefore, it makes the current account issue that we were discussing a moment ago somewhat more difficult and it also comes with employment losses as well, does it not?

Dr Carney: It could.

Chair: I will not persist.

Dr Carney: Yes, I do not want to—

Q31 Chair: I can see your hesitancy and I am not going to persist. Can we also touch on another approach that has been considered, which is the fixed peg Danish option? In their case have a fixed peg with the eurozone. That presupposes very large reserves to enable intervention to support the parity, doesn't it?

Dr Carney: Yes, it does. It also benefits from the tight integration of the economies and I would say it benefits from some of the other economic and institutional structures that I referenced, but there are considerable reserves and I can provide with the precise number. I would say from memory it is a third to 40%, somewhere in that order of magnitude, of broader money, so broader banking liabilities.

Q32 Chair: Perhaps for these sets of examples that you are going to send us it would be helpful to have these numbers set out for the three main ways in which you thought it might be helpful to measure this: broad money, GDP and, it seems to me anyway, that bank deposits are a useful measure.

Dr Carney: Underlying deposits, yes.

Q33 Chair: But the Danish option is a tough option, isn't it, because you have to get even bigger reserves and build up credibility? You were talking about credibility, which has to be accumulated over time in a fixed peg system. That is a hard one, is it not, generally for countries in currency markets?

Dr Carney: It has to be earned, yes.

Q34 Chair: If we put this whole picture together, are we not concluding that there are other options but they are tough and they require a great deal of hard work; the building up of reserves, which may mean budget surpluses, the establishment of credibility and, alongside it, the risk of migration of part or all of the financial sector? Is that not correct?

Dr Carney: I do not want to make a value judgment on the decision in any way, shape or form. Certainly, any currency arrangement has to be adequately supported. It has to be credible. The cost of not having that credibility is considerable, so it is a judgment for the relevant authorities what best suits their economy and their broader circumstances. It is an economic judgment and, to the extent to which it has fiscal implications, it is a judgment about the priorities of that authority, yes.

Chair: That is very helpful. Thank you very much.

Q35 Stewart Hosie: Governor, thank you for what you said at the start, the recognition that this is a very sensitive time. I am not going to probe too much into detail precisely because of that and also the answers you have given, you said, were consistent with what you have previously said. I want to dwell on that. When you were before us in March answering questions on the speech you gave in Edinburgh, you said, “The speech and the Bank’s approach to this issue has been and will continue to be a technocratic approach. It is for others to address these issues and it is ultimately a decision for the Scottish people, which will be taken in the context of many other aspects of the broader issue.” Can I confirm with you that that remains your and the Bank’s position today?

Dr Carney: Thank you, Mr Hosie. Yes, very much. We recognise this is one of many issues that are under consideration.

Q36 Stewart Hosie: It is important in terms of the “Kremlinology” over what is said, particularly by yourself at this point, that that is absolutely clear. At the hearing in March you also described in detail to a number of members of the Committee what would be required to make a formal currency union work and you gave a number of examples of how it has happened elsewhere. You spoke about free movement of labour across the border, free movement of goods and capital, and you spoke about the fiscal arrangements to smooth fluctuations. You spoke about the underlying structures of the economy determining the extent to which there was alignment, and many other aspects of what made a currency union. Can I confirm that nothing you have said since is at all incompatible with that and, indeed, the remarks you made at the TUC conference are absolutely in line with the testimony you gave in March?

Dr Carney: You may absolutely. I will be clear and I will refer, as well, to my speech in Edinburgh. My testimony in March was consistent with the speech in Edinburgh and I noted at the time that being part of a currency union requires some ceding of national sovereignty. I was responding to a question, so I did not use exactly the precise ordering of the words but the point was the same.

Q37 Stewart Hosie: I think when we discussed this matter in March the other ways in which you described that in your speech were sharing responsibility, pooling resources. There were a number of ways in which you described that sharing of responsibility.

Dr Carney: Yes, there are ways of sharing responsibilities, I will say. I am on record and I have been on record for five years on this point, since the start of the eurozone crisis, let us be frank, that one of the lessons of the eurozone to me, over the years consistent in the speech, consistent in March, has been the need for some form of fiscal arrangements between the constituent parts to help with the inevitable fluctuations. I will say, just so we are absolutely clear, that as a point of generality, in my considered opinion, over the medium term the euro area is going to have to build deeper fiscal links across the member states than currently exist in order to have a truly viable and effective currency union for the euro.

Q38 Stewart Hosie: That is helpful. The third question on this theme, and you have already alluded to it today, is what you said at the inflation report monthly press conference on 13 August, “In terms of financial stability questions, I reiterate that whatever happens in the vote, the Bank of England will be the continuing authority for financial stability for some period of time, certainly over the interim period, and would look to discharge those responsibilities accordingly.” That is absolutely the case today; that has not changed at all?

Dr Carney: That has not changed and, just for absolute clarity, I made that point earlier. We are given our responsibilities by Parliament and we discharge them. We are the main principal authority for financial stability, not the sole one but the principal authority for financial stability. In the event of a yes vote, we would continue to be that authority for the transition period. Under the Edinburgh agreement, as you know, that is 18 months.

I will take the opportunity to say that we have, as you would expect, been doing contingency planning. We have been asked this by members of the Committee in the past, Mr Norman and others. We have contingency plans and we would obviously implement them if at all required in the short term to support financial stability. The issues that the Chairman was addressing are medium-term issues that go beyond that transition period, which you understand.

Q39 Stewart Hosie: Absolutely. There is one final question. You described the size of the Scottish financial sector as a quantum of around 10 times GDP. I have seen a number of figures of that nature. I think your GDP figure for Scotland at £106 billion was rather low. I think it is closer to £145 billion onshore and offshore. However, that is neither here nor there. The question is in terms of the quantum in relation to GDP. You are aware that is a contentious issue in the sense that the figure published by the UK Government would tend to include a substantial number of financial assets that are and always have been headquartered in London. Just for clarity, you are aware that this is not a figure that is universally agreed?

Dr Carney: For clarity, so we are on the same page, I rounded down to 10, which brought it to £106 billion, but then also for clarity there would be some discussion of the

apportionment of the offshore, as you know. Under European law, the ultimate backstop for those assets is not where those assets are. It is where they are headquartered.

Stewart Hosie: Indeed.

Dr Carney: My calculation is based on where these institutions are currently headquartered, which is why issues of redomicile and change become relevant. The responsibility of the lender of last resort in an independent Scotland for an entity that is headquartered in Scotland, regardless of where its deposits are in the European Economic Area, is the responsibility of the Scottish state, the ultimate backstop there. That is why that figure is relevant to the issues that we are discussing, if you take the point in time. For obvious reasons, Mr Hosie, I am not going to speculate about potential changes in domicile.

Q40 Stewart Hosie: No, of course.

Dr Carney: Let me reinforce the theme of your question, if you will, which is that my response to a question at the TUC yesterday and my testimony here is entirely consistent with my testimony in March and my speech in January and those two, I believe, were consistent. Maybe some of the adjectives are different but the points are the same.

Stewart Hosie: That is extremely helpful, Governor. Thank you very much.

Q41 Chair: On the document that you are going to send us, it is just a factual document, will you be able to get us that—

Dr Carney: By first thing tomorrow morning. **Chair:** First thing tomorrow morning, that would be very helpful. Thank you.

Q42 Steve Baker: Governor, I am persuaded today not to ask you about the common monetary history of Canada and Scotland, but I am glad that the issue of Scottish bank notes and why private banks issue their own notes has come up. Perhaps we will return to it one way or another after the referendum. Just to move on to productivity and wages, looking at the MPC minutes, it says that excluding the years after the two world wars, current data indicated that the recent period had been the slowest rate of productivity growth over any five years since at least the late 19th century. Has the economy been fundamentally changed by the financial crisis and how? Since you have said so much, may I perhaps ask Professor Miles to begin?

Professor Miles: Yes, I think the financial crisis has had a permanent impact on the economy. I do not think we are going to get back some of what you might call lost productivity, which is very large. We are probably maybe 12% to 13% lower level of productivity than you might have thought if you just carried on in a straight line through 2007 to today. Unfortunately, I do not think we are going to get most of that back. I am a bit more optimistic, though, that we may return to something more normal in terms of the growth of productivity. I do not think the growth of productivity from here on forward should necessarily be lower, but I think we have had a permanent hit to our standard of living.

Q43 Steve Baker: Can I pick up on that one point? You were talking about the straight line growth in productivity. I refer you to chart 2.2 on page 19, which is about household consumption growth outpacing income growth. Just looking at it, you can see there is a spread between consumption and income growth and then there is a particular discontinuity around the crisis and then again we have seen the growth coming up. Do you think we have been too dependent on credit and do you think that has fundamentally changed over the course of the crisis?

Professor Miles: Well, very recently the flow of credit to the household sector has been pretty subdued. As you will know, mortgage lending has been running at very much lower levels than we had before the crisis. We have had a slight reduction in the savings rate over the last few years, and that has held consumption up in the light of significant falls in real incomes. But I would not describe what has happened over the last few years as being fuelled by credit. It is more that people have just reduced their savings rate a bit, but not through borrowing.

Q44 Steve Baker: Dr Weale, did you want to pick up on how the economy has changed and whether this issue of the spread between consumption and income growth is relevant?

Dr Weale: At least what is important to me is what seems to have happened to the supply side. How consumption is financed may affect things in the short term, but you would not think it could have very much of an influence in the long term. Like David Miles, I take the view that we probably will not make up the lost ground for quite a long time at best. The question is whether the productivity growth rate recovers to the sort of thing that we had been used to before the crisis or not. There you have different indicators pointing in different directions. On the continent before the crisis, productivity was growing rather more slowly than at home. One can make the argument that in the period before the crisis there were some factors pushing up on productivity, most notably the way the financial sector was measured in the national accounts. There is no right answer as to how to do that, but part of the volume of the output of the sector was measured with reference to the volume of bank deposits. Now, it is quite easy to increase the amount of bank deposits without needing any more hours worked. That was pushing up on productivity and, conversely, the fact that that process has stopped has pulled down.

Could I just say one other thing? There is a new set of national accounts coming out at the end of this month. We have seen a trailer of them, which I certainly have not fully absorbed. Based on the trailer I have seen, not on any private information, I think it is likely that they will show that the productivity story has still been bad but not quite as bad as we had thought.

Q45 Steve Baker: You have slightly pre-empted my next question. Dr Shafik, perhaps you could comment on the extent that change in the national accounts explains what is happening to productivity.

Dr Shafik: I will start by saying there is a view that some of the productivity that we saw in the past, pre-crisis, was unsustainable because it was based on high rates of leverage,

and some of those growth rates that we saw were probably unsustainable and, therefore, we should not expect to see productivity go back to the levels that we saw pre-crisis. I think the Committee is very familiar with the work that the Bank staff have done to try to explain the 17% loss in productivity relative to trend in the quarterly journal article. Some of it is measurement errors. Some of it is lowered levels of demand. Some of it is substituting labour for capital because wage growth was low.

I think some of that productivity loss we will recoup in the period ahead, but there are some other fundamental changes that have happened, for example, in the composition of the labour force, the increased numbers of older workers, for example, who might be a bit less productive, which will mean that the recovery of productivity may not look as robust as what we saw pre-crisis.

Q46 Steve Baker: I particularly wanted to pick up on this issue of substitution of labour for capital. If I may, page 21, chart 2.6, which is about the capital stock, and also page 27, chart 3.7, which is about whole economy capital services per hour. What I see there is that capital stock rose between, say, 2007 quite markedly before broadly stagnating; whereas if you look at the capital services per hour, there was a sudden peak from 2007 until 2009 and then a collapse in the capital services per hour. Can you try to tie together what is going on there with the stock of capital and the level of capital services per hour with real wage growth, Governor?

Dr Carney: Thank you for the question because I think you are hitting on an important point. I tried to provide some more analysis around this in my speech yesterday to the TUC. It was the bit that was not reported, but this is a crucial point, Mr Baker. This does not explain and you are not suggesting that this explains the whole productivity puzzle or will result in erasure of the shortfall, and I certainly subscribe to what both Dr Weale and Professor Miles said about not recovering that.

I also subscribe to what Martin Weale said about the importance of focusing on the supply side and we are very focused, in terms of the shorter term dynamics, on the supply side. What we have seen is that there has been a labour supply shock, if you will. There have been more people looking for work, looking for more work, staying in work longer. We have quite a marked, and it is noted elsewhere in the report, split in terms of the actual participation rate in the economy versus the batting average of the participation rate if cohorts had followed their previous levels of participation as they progressed through.

The consequence of this has been to help keep wages down and firms seeing low costs of work or hiring relative to new investment, substituting labour for capital. I would add, just to link back to your financial crisis point and the financial impacts, that obviously the period of time over which the financial sector has been healing—as we all know the cost of capital has been higher and the availability of capital has been lower. Again, that tilts the balance in terms of substitution of labour for capital. You see, as you rightly point out, the net impact of that and one would think that could account for some of the reduction in output per hour at a time when GDP is growing.

Now, to finish the thought, if one gets a labour supply shock, that has an effect for a period of time until that labour is absorbed. What is consistent with our forecast is that, as that labour is absorbed, wage growth begins to accelerate. Investment continues to increase.

Productivity picks up. I would say we have quite prudent assumption for the expectation of productivity pick-up over the forecast horizon.

Q47 Steve Baker: I want to come back to something else you said in your speech, but just on this point about investment picking up, do you feel when we are talking about business investment that we drill into enough detail about business investment, in which sectors and at which stages of production? In relation to chart 2.6, there is a comment, “It is possible that excess capital is concentrated in only a few sectors.” The question is: do you think we collect enough information about where this capital is, both sectorally and in terms of stages of production, and would that help to explain what is going on with both the capital stock and the other points that we have just discussed?

Dr Carney: Let me make three points. First, obviously what we are charged with doing is managing monetary policy for the macro economy; so the aggregates matter. There are always bottlenecks and there are always adjustments across sector. That said, we do drill down into sectors. There has been some work by one of our colleagues, Ian McCafferty, and certainly by staff. We have looked at various sectoral compositions of both the productivity shortfall but also where there are bigger bottlenecks. In others, we get regular reports from our agents. We go and visit businesses and so on. We do look at that.

I think there is a richer element of your point as well, which is that it is not just about capital investment growing productivity. Increasingly, process changes, intangibles, other elements that to some extent the national accounts are pulling in, certainly on the R&D side. That will be one of the revisions that we will see. We will see an adjustment in the investment line because they are pulling in R&D, but it is extremely difficult as a statistician to pull in these other elements, which are effectively booked as operating costs but are investments in productivity that are more consistent with this type of economy. You can run a more capital-light economy certainly today than 20 or 30 years ago.

Q48 Steve Baker: I think you know I am coming at this from a Hayekian perspective, which believes that we aggregate away much of the detail that matters. I am looking at your speech to the Monetary Policy Forum in New York where you explained that the stronger critique of the Austrian school about inflation targeting was in relation to capital. I am not going to go through it now because it is not that interesting for the Committee. Perhaps we can discuss it on another occasion.

Dr Carney: You are teasing me. Those are two issues I want to discuss.

Q49 Steve Baker: I think you know that is clearly where I am coming from. I think we are aggregating away detail that matters, which explains this productivity puzzle. I just want to put two other points to you very briefly.

Dr Carney: May I say, Mr Baker, I do not think we are aggregating detail that matters from an inflation perspective. Unit labour costs, average wages across, average productivity, average unit labour cost, those ultimately are key determinants of inflation and so those are judgments. Now, we are going to make different judgments as members

of this committee, as you would expect, about those variables. It matters, but the question you have to ask is from an inflation perspective.

Q50 Steve Baker: I am conscious I want to ask you two questions while I can still get away with it, but I just refer to the—

Chair: If you could be brief it would be very helpful.

Q51 Steve Baker: There are two other points I would like to make. One is that I have listened to my dear friend Professor Kevin Dowd argue many times that a policy of easy credit is a policy of capital consumption. Do you think there is any merit in that argument?

Dr Carney: It is an aphorism. I would like to see the detail behind it.

Chair: Okay, go to your other question.

Q52 Steve Baker: The other point is: to what extent does regime uncertainty, the notion of things like forward guidance and people having to look very carefully at what you are likely to decide about interest rates, produce prejudices in terms of outlook and confidence against investment?

Dr Carney: I would not over-interpret this, but I would say the evidence and certainly the experience since at least the first phase of forward guidance was put in place has been it has been at least correlated with a sharp pick-up in investment consistent, which would go actually to the opposite; that providing the appropriate degree of certainty in terms of the stance of policy, which was harder with—it was clearer and more absolute with forward guidance 1 because there was a threshold, subject to certain caveats. With forward guidance 2, it is more about the medium-term path, but that is providing, not surprisingly, guidance but also some comfort to business. We pick this up on a survey basis and I will not overplay it, but if you tried to make the case that putting guidance in place was associated with slower investment growth, it would be impossible with the data that is sitting in front of you.

Q53 Jesse Norman: I just have a couple of questions about Scotland before I come back later to my other questions. When you met us earlier in the year, in March, Governor, I asked you whether the small size of an independent Scotland's economy, roughly a tenth of the size of the UK, and its exposure to oil and gas sectors might make it a more volatile economy as an independent. You said, "The performance of the Scottish economy relative to the rest of the UK is more volatile because of the industrial structure," which is consistent with what you have said today.

Dr Carney: Yes.

Q54 Jesse Norman: If you look at dollarisation and sterlingisation, as you will be aware there are three categories, broadly speaking, into which countries that have dollarised fall. One is tiny city states, like Andorra, the Vatican and people like that. Second would be states who are in transition, like Montenegro and Kosovo. Third would be countries that have a legacy of economic or political instability, like Panama, Ecuador, El Salvador. Scotland, if it were to sterlingise, would be by far the largest and wealthiest country to do that. Is that your view as well, just to be clear?

Dr Carney: I would add to your list countries engaged in a process of convergence and I am extending your dollarisation and sterlingisation, if you will, to euroisation or pegs or currency boards to the euro in order to converge to the euro. That is not what we are talking about here, but just so we have the complete range. I am safest to say, given what is implied by the question in the referendum, it is a relatively unusual circumstance in terms of to maintain the currency, yes.

Q55 Jesse Norman: It would be relatively unusual for a country this size to have dollarised or sterlingised, so to operate a process of using another country's currency. That is what you have just said, just to be clear.

Dr Carney: I was homing in on the point at which it happens. I am not going to get into political definitions. Hong Kong is of the same size in GDP. It is dollarised but we have had an exchange on that today and back in March in terms of the circumstances there and the requirements that were put in place.

Q56 Jesse Norman: Just to be clear, your answer to my first question was yes, and we are now talking about Hong Kong, which is not a pure dollarized. It has got a currency board, so it is a slightly different set up. What is interesting about Hong Kong though now that you have raised it, is, as you know, it has \$300 billion of foreign exchange reserves and it operates a policy of holding reserves at something like 30% of GDP. If Scotland was to follow the Hong Kong example with £150 billion of GDP, it would be holding £45 billion of reserves, would it not?

Dr Carney: That is the straight—

Jesse Norman: That's a mathematical outcome following Hong Kong. It would be offering, am I right, £45 billion of reserves?

Dr Carney: As per the Chairman's request, we will provide the facts of reserves relative to size of GDP and broad money, but the backing is not uncommon. There are many examples of currency boards or arrangements of dollarisation where those orders of magnitude of reserves are in place, yes.

Chair: On that note, you will give us the rough orders of magnitude that we were discussing for Scotland, without you necessarily saying, and I quite understand you don't want to because it is subject to negotiation, that would be Scotland's reserves. It does not need to say that, but there is the seigniorage and the proportionate share of assets of the Bank of England, which you can give us as your ball park numbers.

Jesse Norman: Chairman, with your agreement, it would be helpful for the Bank to give us those numbers for each of the classes that we have identified, so that—

Chair: The three classes, yes, which is what the Governor has already agreed to do.

Jesse Norman: No, but for different countries so that one can see it.

Chair: Yes.

Jesse Norman: Yes, okay, good.

Chair: And for each of these key countries, Denmark, Hong Kong—

Jesse Norman: As well as the smaller ones, if we can get a sense of—

Chair: We wanted to get a couple of smaller ones—

Q57 Jesse Norman: The point I am trying to get to, Governor, is a mathematical point. It does not require anything other than you recognising the maths, but if Scotland is treated like Hong Kong and had reserves of 30% of GDP it would have roughly £45 billion worth of reserves. That is a mathematical fact. If that were the case then that requirement for reserves would be three times the number that you have described as being the reserves in your answers to Mr Tyrie. The difference would be of the order of £28 billion to £30 billion, so far unfunded and being required to be made up through the budget and balance of payment surplus that you have described with interim arrangements. Is that not correct?

Dr Carney: If I may, what I would very much prefer is to stay in line with my previous testimony in speeches and, in that regard, we have discussed the range of institutional arrangements, economic characteristics that are consistent with currency union and also with sterlingisation and unilateral adoption. We have also discussed the relative orders of magnitude of reserves, in fact, for various examples that exist. What I have not provided in the past and I do not want to today is an estimate of what might be required for Scotland in a hypothetical situation. With respect, Mr Norman, I would prefer that we stay with the economics of it, which you have accurately described, and the facts that exist in other circumstances.

Q58 Jesse Norman: I am grateful for that and I understand. The difficulty with that is that the Bank is essentially subcontracting out a decision or a judgment as to whether Scotland's economy is more like Andorra's or one of the European aspirant states or Hong Kong and I can see why one might do that, but it has had the effect of extreme lack of clarity. It would be helpful if you would say what is becoming clear, which is a very significant increase in reserves would be required to sustain that. Am I not right about that?

Dr Carney: I would make the point that the scale of reserves that a country that adopts another country's currency requires increases with the size of their financial system, the complexity of their financial system, the degree in which there is cross-border flows of their financial system, and there are many examples out there on which to anchor those

calculations. As I believe I said in my opening response to the first question, it is also a function of the fiscal position of the country, the fiscal strength of the country, because that provides greater credibility the stronger it is. As we discussed in March, it is a function of the credibility of the arrangement; in other words, is it viewed as a permanent arrangement relationship or is there a possibility that is a temporary arrangement? I summarise that in terms of, is it part of a process of convergence or divergence, which is a broader judgment?

Q59 Chair: But it is a fact, is it not, that countries who are running sterlingisation-type policies with other currencies need very large reserves?

Dr Carney: It is a fact that the size of the reserves is one of the—

Chair: It is easier to say yes.

Dr Carney: No, but it is a fact that it is one of the most important factors that determines their credibility. It is not the sole factor.

Chair: But it is a fact that countries that are running successful policies of that type have large reserves.

Dr Carney: Yes.

Q60 Chair: Thank you. It is also a fact that at the start Scotland won't have very large reserves.

Dr Carney: It is not for me to judge that. It is in negotiation.

Q61 Mark Garnier: Governor, would you forgive me if I just, as a bear of very simple brain, pick up on the last point, on the Scotland thing? This is the sterlingisation of it and if I can just cover one or two of your figures again and I hope I do not need to worry about this. But the GDP of Scotland is £106 billion, I think you said, if that is right. This is not the reserves of a currency board; sorry, £150 billion. You said that in the case of a much smaller and less sophisticated country, in order to have a sterlingisation or dollarisation, as opposed to a currency board, you needed reserves of something in the proportion of 25% of GDP and a more sophisticated country like Hong Kong would be about 110% of GDP without a currency board.

Dr Mark Carney: Yes.

Mark Garnier: Given the fact that Scotland's banking assets are something in the region of 10 times their GDP, it is fair to assume that Scotland has a pretty sophisticated economy. Does that imply, just on the maths without any judgment, that we are looking at reserves in the requirement of 110% of GDP for a country like Scotland?

Dr Mark Carney: The example we have discussed—

Mark Garnier: Which is the currency board.

Dr Mark Carney: —and I think it was Pat McFadden who raised it in March, if memory serves, was Hong Kong with the currency board: a sophisticated financial system, US\$300 billion of reserves, which was more than 100% of Hong Kong GDP. I would reconcile, by the way, as we are going back and forth between various sizes of Scottish GDP, it is an onshore/offshore question in terms of the oil and gas industry, which is obviously of considerable importance.

Q62 Mark Garnier: Nonetheless, it is going to be a significant number; in the order of magnitude of, broadly speaking, around 100% of GDP, in the broader sense or would you rather not—

Dr Carney: Just to be consistent, I just resisted the effective line of questioning from Mr Norman asking for the same thing. I stand by my responses in March, the way I encapsulated them in terms of my response to the first question. These are the factors that determine relative success. The credibility of the backing through the lender of last resort through the deposit insurance scheme of the broad money, one of the factors that influences that is the size of the reserves. That itself is a function of other things. There is a range of examples out there.

Mark Garnier: You will furnish us with the examples?

Dr Carney: We will furnish you with the examples and leave the precise calculations for others.

Q63 Mark Garnier: Just a very quick thing, do you know what percentage of GDP financial services contributes to Scotland, off the top of your head?

Dr Carney: It is a higher percentage than the rest of the country but it is low single digits.

Mark Garnier: It is about 11%, I reckon.

Dr Carney: Sorry, low double digits; about 10% or 11%, yes.

Mark Garnier: Okay, fantastic.

Dr Carney: Yes, sorry, low double digits—

Mark Garnier: You will be pleased to hear I am going to move on to unemployment. Dr Weale, if I may, can I turn to you? Thank you very much, Governor.

Dr Carney: Yes, thank you.

Q64 Mark Garnier: I do apologise: immigration. Immigration obviously is a big issue. People talk about it a great deal in the UK. Would you be able to give us an assessment of what effect on wage inflation or deflation immigration is having in the UK?

Dr Weale: There have been a number of different views on that from the committee's point of view. What we do is look at the overall picture of labour market pressures. The

way I look at inflation, and I did talk about it in June, is that it depends on unemployment relative to some estimate of medium-term unemployment. Of course, you cannot observe medium-term unemployment. The Bank has produced estimates of that and recently we have found that wage inflation has been lower than our medium-term estimates of unemployment suggested and that led me to suggest that a strong possibility was that the labour market was working rather better.

I should say there are some other ways in which the labour market and spare capacity in the labour market may influence inflation. Some people have taken the view that there is an appreciable number of people who would like to be working longer hours than they do work; so they are, in some sense, like unemployed people. My own sense has been that those people, when they do find themselves working longer hours, are not quite as Stakhanovite as they had suggested when they answered the original questionnaire. I am sorry that is not directly answering your question, but I am describing the way I look at wage inflation and that is from the balance of pressures in the labour market.

Q65 Mark Garnier: The fact that wages have gone up by less than inflation over the last few years could be, in a sense, explained partly by austerity but also partly by inflation.

Dr Weale: I think the main reason why wages had gone up by less than inflation is because, at least until very recently, output had been lower than it was before the crisis. At the same time, we know the number of hours that people have worked have gone up and that is a smaller cake divided among more hours working, so you would expect real wages to have been depressed. The mechanism by which that happened was through wages rising by less than inflation.

Could I make one other point, please, which is that average weekly earnings, the measure of earnings that the ONS publishes on a monthly basis and a measure I think I know quite a lot about, has been very weak recently. When I go and visit businesses, as I was doing on Monday and yesterday in the north-east, people are talking about pay increases of 2% to 3%, whereas two years ago one was hearing a lot of firms saying they were having wage rises¹. We have looked into why there might be this discrepancy and, in some sense, it is the factor that the Governor mentioned earlier: that recently people seemed to have been hiring less skilled forms of labour. When you look at the average figure, a change in the mix may also tend to depress the average.

Q66 Mark Garnier: Obviously immigration is not reaching the targets that the Government originally set itself at the beginning of this term. Do you think that this failure to reach its target is as a result of more people coming into work that should not be here because of the success of our economy; so because our economy is doing better than Europe people are coming here to find jobs, whereas they could not find them there? While it is not necessarily welcomed by the general public, it could be seen as a sign of the success of economic policy.

¹ *Note by witness:* Meant to say “freezes”.

Dr Weale: No. There was a period when the economy was growing less rapidly than the continental economies. At the moment, it seems to be growing more rapidly. Obviously some people do look for opportunities and naturally they take the opportunities they find but, as I say, the main factors from our point of view are the balance of supply relative to demand in the labour market, and I think I have described the way in which at least I find it helpful to look at that.

Mark Garnier: Does anybody disagree with any of that or want to comment on it? No.

Q67 Mr Mudie: Governor, I have tried my best, but I cannot find a Scottish aspect to the questions I am going to ask you. I thought I had come into Scottish Affairs when I came in late. I also asked Mark, as we were covering the same area, what he was doing and he said, “Immigration”, and I thought it was about borders between us and England, but you will be relieved to hear these are just kind of straightforward questions. You said there were two hard calls on the question of employment. One was more slack in the economy, which would affect your decision, and the second one was you see a low or medium-term equilibrium rate of unemployment. For the people who watch us on a Saturday night or a Sunday, can you tell us what that means in non-economic language? Secondly, and more importantly, the Bank staff have a level at the moment, but they see that going down, I think, to 4.8% or something. You will give me the exact figures.

Dr Carney: I did not catch, Mr Mudie, which figure you were asking for. I just missed it.

Mr Mudie: At what rate you would reach that equilibrium. It was in the sixes and I think the Bank staff are suggesting it is 4.8% or something. What I want to know, and I am not quibbling with the Bank’s figures, if the 4.8% was the figure where you decided this was the time to follow the hawks what would be the total number of unemployed people at that stage?

Dr Carney: The first aspect of your question is what is the medium-term equilibrium rate of unemployment. If we were at that rate of unemployment and firms were operating at normal capacity, full capacity—

Mr Mudie: Or at capacity.

Dr Carney: —and inflation would be at target at the 2% target and it would not accelerate up and it would not fall down, so we would be in balance.

Dr Weale said something a moment ago that is important, which is that one of the things we have observed has been a more rapid absorption of longer-term unemployed. People who have been longer-term unemployed have come back into work more rapidly than we would have expected. That is one of the factors that has prompted us to lower our estimate of that medium-term equilibrium rate of unemployment. It is important, because it is where we can get the economy to without inflation accelerating once we get to there. It gets to a real point with which you would be familiar. The challenge is that, when people are unemployed, the longer they are unemployed the more they lose their skills, detachment from the labour market, and the tougher it is to get them back into

employment. The very positive dynamic of the UK labour market in recent years has been the speed with which the unemployed have found work.

There are lots more people out there looking for work and people who have found work might want to work longer and it has been suggested they may not be in exactly the right jobs for their skills and so on. There still is that slack that we brought together in this best collective judgment around 1% of GDP, but we have been tracking what has been going on in the job market very closely and we have been updating with each inflation report our estimate of what the economy can sustain, the level of unemployment the economy can sustain working at full capacity, keeping inflation on target, and it has been coming down because of this performance.

The second part of your question was—

Q68 Mr Mudie: It was just the numbers. They are suggesting 4.8%. What would 4.8%—

Dr Carney: I am not going to be able to do the calculation in my head. Consistent with the forecast, though, which between today, unemployment at 6.4%, and at the end of the forecast a rise in—

Mr Mudie: Which equates to something like 2.08 million people, so 5.2%.

Dr Carney: It equates to a little less than 5.5% unemployment. The forecast horizon, it is about another 1.2 million people in work over that period and, yes, this is confirmed.

Q69 Mr Mudie: Tell me how many people would be unemployed when you were at that level of equilibrium. I am not being funny, I am just after—

Dr Carney: Yes. No, I understand. I am trying to recall, because we updated the participation rate.

Q70 Mr Mudie: I am not being funny, but this is what distresses me. Up in the north, Yorkshire, Leeds, in the inner city, that is just another phrase. They are not just a percentage. They are people, and some of you are settling the rate and deciding that interest rates should go up. It would make it harder for those people to find work, and yet you do not know, just off the top of your head, the number of people you are condemning to unemployment. That distresses me. But never mind, go on; what figure have we agreed on? Just give me a figure.

Professor Miles: The number of people employed is a bit over 30 million and if you add in the unemployed it is about 33 million; so 5% of that will be about 1.7 million, off the top of my head.

Q71 Mr Mudie: David, with the greatest of respect, we know at six point—whatever the unemployment figure is at the moment—that equates to the present unemployment level of 2,088,000 people. Yes?

Dr Carney: That is the claimants, but if I may, Mr Mudie—

Mr Mudie: No, no, but it would be higher if you included the people who do not register for unemployment.

Dr Carney: It is about double the amount who are claiming, the actual unemployed, because the claimant count is closer to 3. The unemployed, as David was just moving towards—

Q72 Mr Mudie: So it is how many? How many are you going to, David? What is the total?

Professor Miles: If you thought 5% was where you could get to as an equilibrium and that would be okay and inflation could be at the target level, which seems to me pretty plausible, 5% just mechanically of the labour force of roughly 33 million people is about 1.7 million; just 5% of that number.

Q73 Mr Mudie: 1.7 million. As economists, what is the figure that you are comfortable with as unemployed in terms of the short-term people who are out and in? There is a number we would expect in a normal economy to be out of work to enable it to run with liquidity; you can almost say human liquidity.

Dr Carney: That is where you started in terms of percentages, so it is that medium-term equilibrium rate of unemployment that is consistent. When we say, as economists or as policy-makers what is the rate of unemployment that is consistent with that—

Q74 Mr Mudie: No, surely, Governor, it is not. Put me right, as you always do. Put me right: as I understood the situation, that meant that when wage inflation took off, because we were working at capacity and industries could not get people, they increased the wages, which feed through to inflation and feed to you taking a decision on interest policy: “We had better calm the thing down by putting up interest rates”. Is that not right, David? You shook your head there.

Professor Miles: I think the number you are talking about is pretty close to the number we are talking about. Some people call it the natural rate or the neutral rate. It is the number that might be of the order of 5%.

Q75 Mr Mudie: Look, I am not quibbling about your figures. Let me tell you where I am going. If there is, what did you say, 1.2 million or 1.3 million?

Professor Miles: 1.7 million.

Mr Mudie: 1.7 million.

Professor Miles: That was roughly 5% of the—

Mr Mudie: Unemployed. We subtract from those a number that will always be unemployed; not as individuals but as a number, maybe 500,000, that we need to put some human liquidity into the system. The others are wanting work, aren't they? They are

available. Now, if you settle equilibrium too soon, if you stop it too soon, they are condemned to finding a job—

Dr Weale: Mr Mudie, could I—

Mr Mudie: I would prefer the Governor to speak. You are someone who would prefer to do that, but the Governor has some compassion.

Dr Carney: There are equal levels of compassion across the Monetary Policy Committee, Mr Mudie, but there are differences of opinion, in part, about where that number would be. The committee has been updating the estimate of that number, among other things. We have been learning with the performance of the labour market and we have been bringing that number down. The degree of confidence—that is a very important reason why the committee collectively has decided not to tighten monetary policy and the expectation is that we will continue to grow jobs—I gave you the figure, the total amount—and that wages are going to pick up before it is—

Q76 Mr Mudie: Yes, I am glad you have done that. I am glad you still have a majority. In your report, you indicate that IT, construction and manufacturing are all starting to experience tightening of recruitment. Is there not a scenario where the shortage of skilled people means that your equilibrium is reached sooner, the wage inflation effect means you have to take a decision on interest rates sooner than you anticipate, or is my fear about this unfounded?

Dr Carney: What matters is the average wage growth across the economy and, very importantly, those averages relative to productivity across the economy, so the growth overall in unit labour costs, we have grown. The judgment of the committee is we have further room to go in using up the slack in the labour market. Of course, as the labour market tightens, a couple of things are going to happen. First, you are going to see new recruits get higher pay packages to attract them in and you are going to see tightness in certain sectors. That is natural. These are leading indicators of tightening in the labour market, but they are not decisive indicators certainly in my own personal judgment and shared by others on the committee.

Chair: Do you have another question?

Q77 Mr Mudie: I do. I have another two, Chairman. I will put a Scottish one and you will give me time, I suppose. Are you worried about the fact that we are so soon coming out of a recession and we are already starting to fear skill shortages?

Dr Carney: From a broader perspective, there is concern in terms of matching in the labour market, without question, and a subject at the TUC Congress in the last several days has been this continual need to upgrade skills across the economy. Yes, skill shortages are something we hear constantly about.

Q78 Mr Mudie: Yes. I will do my second question with the permission of the Chair.

Chair: You have permission.

Mr Mudie: Thank you. It is in two parts. The first part is when the Chancellor gave you the new remit in 2013 at the Budget, he avoided giving you a dual mandate but he did say you should give consideration to the economy when you were dealing with inflation. He then said one of the aspects would be better communication between yourselves at the Bank and the Treasury. If the Monetary Policy Committee understands the importance of skill shortages and the bad effect it would have on the economy, has any communication taken place between yourselves and the Treasury on that matter and, if not, why not?

The second one is in terms of immigration. Certainly people who are left out of the labour market in the inner cities get very upset about people coming from other countries in Europe and finding jobs easily. They overlook the fact that these people are coming with skills and that is the reason. In your reports you do not seem to build that into capacity or future capacity; the fact that we are not looking, as we have looked 10 years ago, at a fixed UK labour force but we have a capacity to pull skills in from the rest of Europe. Do you take that into consideration?

Dr Carney: We do take it into consideration. We look at, for example—

Mr Mudie: You just do not mention it.

Dr Carney: We have not mentioned it in terms of how things are at the moment. We follow the data that is tracked by others in terms of nationality of new employees and residency of new employees. We look at the split over various cohorts. Since 2008, for example, UK nationals relative to the 1 million-plus jobs that have been created, a little more than 60% were absorbed by UK nationals, but there has been an important amount of new workers coming, as there has been in the past prior to the recession, from elsewhere in the European Union.

On co-ordination with Treasury, I will speak at my level. I have had discussions with the Chancellor on a wide range of aspects of the labour market, as you would expect, including skills, and those would take place also at other levels of the Bank and they are aware. The Treasury is briefed as well of what we are hearing in the field by our agents in terms of issues such as skills shortages and analysis that we do, so yes.

Q79 Steve Baker: I am absolutely certain that everybody here wants real wages to rise. The questions are how and who gets the credit. Governor, when you said to the Trade Union Congress you will ultimately determine the size of Britain's pay rise, were you encouraging them to take industrial action to force up pay rates or something else?

Dr Carney: No, I am afraid you have taken my remarks out of context and I am shocked to have that happen. The preceding paragraphs in fact in this speech build up the point around growing productivity. Ultimately real wages are going to track productivity. What we can do is help bring the economy to its current potential over our forecast horizon. We are not the ones who are going to drive productivity. The "you" refers to unions, workers, businesses and governments in setting policies, including around skills, that will determine

that potential rate of growth. Mr Mudie's line of questioning around skills is bang on, because that is what is going to be needed to boost our productivity.

Q80 Mr Ruffley: Dr Weale, do you disagree with the central inflation forecast?

Dr Weale: I do fear that the inflation pressures are going to be slightly stronger than the central forecast. That indeed is the reason why in August I voted the way I did. A separate and material factor is that for perhaps up to three years, I was coming to this Committee along with my then colleagues saying that we were looking through the effects of the exchange rate fall and the oil price rise on the inflation rate. Now, having said that, when the exchange rate had fallen and the oil price had risen I similarly need to feel that I should look through that when, at least until recently, the exchange rate has risen and fuel prices have fallen. How important is that? On page 32 of the inflation report we say that the peak impact of the effects of the appreciation of sterling on the inflation rate is about half a percentage point, so the amount that I want to look through is not trivial.

Q81 Mr Ruffley: What would you say were the main points of disagreement between your position and the majority of the MPC?

Dr Weale: I am always nervous of trying to speak for my colleagues, although fortunately there are three of them here.

Mr Ruffley: I think a lot of people would like to understand what your major point of difference is, or what differences there are.

Dr Weale: Absolutely. Over and above the point I have made about looking through these one-off influences, I suppose the other issue is whether one should wait to see signs of movement, acceleration in wage rates or whether we should make the first move with some anticipation of them. I can see arguments both ways. What tipped my view in favour of anticipating them is that, although one never knows quite what to make of it, the businesses I talk to do talk about pay pressures tightening. They talk about how they have to pay more for new recruits than they are paying their existing staff. Most recently, we have seen some signs of labour market turnover picking up, which may be an indicator that an acceleration of wage growth is not very far around the corner.

Q82 Mr Ruffley: Dr Shafik, this evidence of private sector wage increases that Dr Weale has obviously placed a bit of weight on, why do you think he is wrong? What evidence is he looking at and what evidence are you and your colleagues looking at that leads you to different conclusion?

Dr Shafik: I think, as Dr Weale has said, there are forward-looking indicators of the prospect of wage growth. For example, the REC Survey, which looks at wages of new recruits is anticipating a 2% wage rise by December. We at the Bank and the committee look at a variety of models that forecast prospective wage growth. We have about a half a dozen different ways of forecasting that. All of those seem to point to the fact that wage growth is imminent, on average maybe about 1.5%, but I think those models and those forecasts and those forward indicators have indicated that wage growth is imminent in the

past and the actual data have disappointed us. I think it is that sense that, even though we anticipate wage growth coming, we have been disappointed in the past made me and other members of the committee feel it is too early to make that decision.

Q83 Mr Ruffley: Were you at all close to voting for a rate rise, Dr Shafik?

Mr Mudie: You are still on your probationary period.

Mr Ruffley: Not at all. I am just interested.

Dr Shafik: No, I think I voted the way I did because I felt that, on balance—and I think the reason we have a committee is that these are based on judgments. The numbers only tell us so much and my judgment was it was premature, given the balance of what we anticipated happening to wages, what had happened, how productivity has continued to disappoint, the prospects of growth returning to some lower level over the course of the forecast period. Given the key judgments that we had to make on the path of growth, the path of productivity, the path of wages and labour force participation, I felt that on balance it was premature because the risks of moving now exceeded the benefits of pre-empting inflation, which so far has not appeared. The fact that the CPI came out at 1.6%, after our meeting I think, confirmed that that judgment was appropriate.

Q84 Mr Ruffley: Before the next monthly meeting, what indicator would have to change for you to warrant a rise in the policy rate?

Dr Shafik: I think, like all members of the committee, none of us hitch our star to one indicator. I think we look at a broad array of indicators. I think at this juncture, a key indicator would be the relationship between wage growth and productivity and the prospects of that indicator going forward. Having said that, that is the key driver of domestic inflation, but we would also need to look, I think as Dr Weale has pointed out, at what is happening to international prices, the exchange rate, commodity prices and so on. But at this juncture I think that relationship between wages and productivity would be quite important.

Q85 Mr Ruffley: Given that real wages relative to capital have fallen, do you think a big part of the productivity puzzle is labour substitution for capital?

Dr Shafik: I think that is part of the story and that is part of the story of this increasingly high participation rate, which has now reached about 64%. Productivity in the first quarter this year disappointed. It was about 0.4% relative to historical average of about 2.5%, so we are way below the kind of productivity recovery that we would like to see and the structural changes that we are seeing in the labour market are an important part of that story. To be honest with you, though, I do not think we have got to the bottom of the productivity puzzle yet. Some of the explanations have fallen away, but we are still left with several potential explanations.

Q86 Mr Ruffley: Just finally, Dr Shafik, in the Governor's speech yesterday he noted that, owing to the differing labour market responses to the economic crisis, "Monetary policy in the US, euro area and the UK can be expected to be less synchronised than in recent years". Just drawing on your international economic experience and your knowledge of the UK economy, what implications would that lack of synchronisation have potentially for the UK? Why does it matter or how might it matter?

Dr Shafik: I will start with the global perspective and then turn to the implications for the UK. From a global perspective, it reduces the risk that you have a synchronised rise in rates across the world and then that results in a sort of massive global adjustment away from riskier assets and so on; so the lack of synchronisation is advantageous from a global stability perspective. For the UK, the risk of being a first mover is that it has implications for the exchange rate and that, of course, has implications for inflation and the overall macro economy.

Q87 Mr Ruffley: It could be benign in terms of imported prices being lower if sterling strengthens, but are there any other implications?

Dr Shafik: That is the upside. It is good for inflation and it is bad for the current account itself.

Q88 Mr Ruffley: Sure, but if you just unpack this lack of synchronisation, because the performance of our labour market might have prompted this lack of synchronisation, what other effects might it have? I will ask the Governor. Why did you draw attention to it in your speech?

Dr Carney: I was trying to build up the main two points: first, broad direction of policy. We have seen important moves recently by the ECB in one direction, a significant further easing in policy. The broad direction of policy in the United Kingdom, in my judgment, will be a tightening of policy. If I may make this point, which is that, just to put all of this in context in terms of timing and path of monetary policy, the MPC's forecast has inflation returning from the low current levels; dipping down a bit, we expect, in the next few readings, but below the inflation target; returning back to the inflation target in three years over the entirety of the forecast horizon. We are in a position where we have low unit labour cost growth. We have average wages growing less than 1%. We do not expect either of those to persist. We expect those to start to pick up, but the mass of opinion wants more evidence of that pick-up. In the context of a benign inflation environment to begin with and a very slow return to the inflation target, using a lot of flexibility in our mandate to get back to target, in that context people voted the way they did in August and September.

Consistent with the normalisation of the economy, consistent with the progress of that forecast, that is consistent with a tightening of policy in the UK, which is obviously in the opposite direction of the eurozone. I wanted to draw attention to that and then I wanted to go on to explain why that was the case. At the core of that is the differing performance of the labour markets and what I am using to judge developments in the UK labour markets. The message was, as you have seen because you have read the speech, that people should expect interest rates to rise. Our forecast has them rising by the spring. That just uses a

market curve. Equally, as we have stressed on countless occasions now, our expectation, it is not a promise but our expectation, is that, over the medium term, those increases will be limited and that process will be gradual for a variety of short and medium-term factors that have been affecting our economy.

Q89 Mr Love: Governor, in the minutes of the August meeting, it was noted that the committee's guidance on the likely pace and extent of interest rate rises was an expectation, not a promise. Why did you make that comment?

Dr Carney: We first put in place that guidance in the February inflation report and in the box in the inflation report where we described the guidance we made the point that if economic events proved materially different from our core expectation then we would adjust policy accordingly. You would expect us to adjust policy consistent with achieving the inflation targets. Using the phrase "expectation, not a promise", not a guarantee in other words, is just a tighter way of expressing the same sentiment that we had been stressing since February.

Q90 Mr Love: Was part of the reason that market participants were placing too much emphasis on the guidance?

Dr Carney: I hesitate to judge that. I will speak personally. The reasons why I expect the path of policy to be gradual and interest rates to rise, when they begin to rise to a limited extent, are several. There are several major factors that are weighing on this economy. They start with the weakness abroad of our major export market. They extend to the ongoing fiscal consolidation and, very importantly, and we have talked very little about this, household balance sheet repair, the scale of debt on households. In an environment where there has been an absence to date of real wages increases—we are just talking about prospective real wage increases—that burden has not lessened for a large number of households. In that environment one can expect potentially a larger reaction to an adjustment in interest rates than we would have seen in previous environments, but it extends further to medium-term factors, which include the ultimate impact and equilibrium that comes from financial reform to broader savings investment imbalances in the global economy. There are a variety of factors behind that expectation and, if I may, I think it is a question of degree as opposed to whether it be fulfilled, but we try to make that clear.

Q91 Mr Love: Given all those caveats, including "dependent on economic conditions", which I notice you repeated yesterday at the TUC, what is the point of this guidance?

Dr Carney: I would flip it around. Your previous question was, were market participants putting too much weight on it, which suggests that market participants have put some weight on it. I think, if you do look at broader developments in financial markets, interest rate future markets, forward curves both in the US and the United Kingdom where there has been this guidance since it was put in place in February/March, there have been moves towards limited and gradual. I am not going to judge the degree of those medium-term moves. There are some other factors, most recently the developments in Europe, that

presumably are driving some yield movements in other major bond markets, but elements of this have been taken on by market participants. They are free to do so or not.

The other point, though, is that, when one goes around to speak to businesses, they are not as obsessed with what is going to happen in the short term. In other words, they are not obsessed about when the first rate rise is. They are thinking about their hiring investment plans. They are thinking about the medium term and providing them a perspective as best we can about what is going to happen in the medium term I have always found has been quite helpful. Now, we are not going to oversell it. It is an expectation, not a promise, but it is an expectation that is grounded in some pretty big economic forces that are facing this economy today and will continue to do so for some time.

Q92 Mr Love: The more we depend on formulations like “dependent on economic circumstances” are we not moving back into a situation that existed in the pre-guidance world? Isn’t that what we have always done, “dependent on economic conditions”?

Dr Carney: It is always what we have done. When we have been in extreme circumstances we have been able to provide clearer guidance. We provided clear guidance a little more than a year ago using a threshold. We provided this guidance around the medium term. We have provided guidance around what we intend to do with our asset purchase facilities. But we are trying to contribute to a process of normalisation of this economy and the more this economy normalises, the more monetary policy can normalise.

In my judgment, I do not think it is yet time to underplay the exceptional circumstances we remain in. Interest rates are still at the zero lower band. We still have substantial spare capacity. We still have all other major central banks engaged in quantitative easing now. The US is at the tail end, but they are still actively engaged in quantitative easing. We still have a global economy that is growing below trend and we still have extraordinary weights of debt. I will put it a different way. There is still significant balance sheet repair that is required both in the public and private sectors in this country. We might want to get back the old days, but it is going to be a while yet.

Q93 Mr Love: I take the point you make about the exceptional circumstances we are in and that did require some guidance, but don’t you accept that we will move from forward guidance to what was described in the media as “fuzzy guidance”? To counter-arguments of inconsistency you have introduced “dependent on economic conditions”, but are we not in fact seeing the end of the guidance process and would it not be better to announce that rather than to let it seep into the public domain?

Dr Carney: Certainly the first phase of guidance was cleaner, was harder, was clearer, with a specific threshold, but that was an easier call. That was a very easy call. There was substantial slack in the economy and saying we were not even going to begin to think about raising interest rates until the unemployment rate goes down to 7% was the right thing to do and it had an impact. Lo and behold, the committee judged unanimously when the employment rate went down to 7% that it was not time to raise interest rates. So the guidance was effective and it helped serve that. Yes, the guidance we are giving now is

not as hard as the guidance we gave before. It is softer, if you will. It is qualitative. It is towards the medium, but it is—

Q94 Mr Love: But what is the difference between again, your words, the guidance you are giving now and what was given throughout the whole history of the MPC in terms of relying on economic conditions?

Dr Carney: The substantive difference starts with what we intend to do with £375 billion of gilts, where there is hard guidance both about reinvestment and the point at which we would begin to consider sales of those gilts. That is one. Secondly, there is guidance that is built on the economics around the medium-term path of interest rates, which is not just reliant on where the market is, just the mechanical use of a market curve and a forecast, but provides guidance to markets and to businesses. Yes, everything is dependent on economic circumstances, but it is substantive and it is consistent with adjustments in expectations.

Q95 Chair: Sorry to interrupt, but just to follow Andy Love's question there, I did not quite work out what the new fuzzy guidance said with respect to the second of the two items you listed. The first on the QE is clear enough.

Dr Carney: The first on QE, you mean in terms of reinvestment.

Chair: Yes, that is clear. It is the second one.

Dr Carney: We provided in the May report the guidance. In fact, following up on a conversation we had with this Committee that—

Chair: No, I remember it well. That is why I am raising it.

Dr Carney: We would not engage in asset sales until the bank rate had been raised to a level from which it could be materially lowered if stimulus were required in the future.

Chair: I see.

Dr Carney: That is guidance that the committee has given.

Q96 Chair: I am just trying to get back to what this new guidance is offering with respect to judgments on the state of the economy beyond the approach that was being used prior to this guidance.

Dr Carney: I am sorry?

Chair: We had a system in place where judgments were made about the economy and, as Andy said a moment ago, since the MPC has been in existence, and what we want to know is what is new in that respect, excluding the QE aspect with fuzzy guidance or guidance mark II or whatever you want to call it.

Dr Carney: May I ask you, Chair, what guidance have we given on the expected path of interest rates?

Chair: Unfortunately I do the asking of the questions here.

Dr Carney: The answer to that is we expect that the path of interest rates will move more gradually and to a more limited extent in this tightening cycle than it has in the past. Since we provided that guidance, financial markets have moved consistent with that guidance. Businesses understand what that means. We have talked in terms of what the historic medium-term equilibrium interest rate has been in this economy. It has been around 5%. We would expect, over the medium term, that the bank rate, consistent with this economy, operating at full capacity and inflation remaining at target, would be materially lower than that. That is guidance.

Chair: Sorry, Andy, I did not mean to interrupt. It was just to clarify that point.

Dr Carney: There is a very handy clarification of it in 60 words in one of the national newspapers. I can send it to you. That was not an op-ed from the Bank of England. It was penned by one of their—

Q97 Mr Love: Forward guidance was always meant to be temporary. When do you see it coming to an end and what would be the circumstances? Will it be the first rate increase? Will it be dealing with £375 billion? Will it be the exceptional circumstances of the economy? How do you see this issue going forward and when will forward guidance come to an end?

Dr Carney: A couple of points and speaking in general terms, part of the point of providing this guidance is helping to manage an exit from the extraordinary, if not emergency, settings of monetary policy. That is why we had £375 billion of gilts in the asset purchase facility and why we have interest rates as low as they possibly can go. Part of it is managing that exit. There is a judgment, and it is a judgment for the committee as we go through that process of normalisation, when we have effectively moved out of exceptional circumstances and whether there are still merits, there is still utility, there is still value in providing additional guidance and, in addition, whether there is still sufficient consensus to provide guidance particularly about the medium term. Part of this is very much about a process of normalisation in managing an exit. I would suggest that, certainly with respect to assets, the guidance we have already given around the asset purchase facility indicates that the exit is not achieved on the day that we have the first rate increase, because our guidance stands well beyond that.

Q98 John Mann: How can you determine when forward guidance is going to end, considering that it was instigated by the Chancellor in his budget in March 2013 in a request several months before you arrived?

Dr Carney: I personally cannot determine it because it is a determination of the Monetary Policy Committee. The Chancellor's remit letter to Governor King asked for the committee to look into the utility of forward guidance as an instrument. It is not a mandate of the MPC.

Q99 John Mann: It was a hint though, I think. When does summer begin?

Dr Carney: I am sorry?

John Mann: When does summer begin in the United Kingdom?

Dr Carney: 21 June.

John Mann: That is your definition of summer?

Chair: Steady on. He is Canadian. We cannot expect him to know exactly when summer begins. I cannot remember myself when summer begins. You are welcome to tell us.

John Mann: I am not asking a factual question, Chairman. I am asking what the Governor's interpretation is of when summer in the United Kingdom begins.

Chair: We can move on.

John Mann: No, I would like to know when the Governor believes, in his terms, his definition—

Dr Carney: In calendar terms, 21 June.

Q100 John Mann: I could have asked when spring was, because you are suggesting that the rate rise on current forecasts is likely to be by spring, but most people would deem summer to come in at the beginning of May.

Dr Carney: By spring. Sorry, the passage you are referring relates to the forecast that is in the inflation report that we are discussing. The forecast uses a market curve, so the curve in the market for forward interest rates. That was in place at the time we put together this forecast. That market curve had an increase in interest rates in February of 2015, which is by spring, by the time spring begins. That is what it refers to. I did not give the exact date of the market forecast for the purposes of speaking to the TUC, but that is what is in this forecast.

Q101 John Mann: That has not changed?

Dr Carney: Our forecast is not going to change until the November inflation report, no.

John Mann: I am just trying to ascertain whether spring had changed.

Dr Carney: Just to be clear, Mr Mann, what I said in my speech was this forecast is conditioned on a market curve that has a first interest rate rise by spring and then it rises gently thereafter, which was consistent with the market curve. In that forecast with that profile, as I said in reference to Mr Ruffley earlier, inflation, even with a slow, gentle profile of inflation, just gets back to target over the three-year forecast horizon, which provides some context to the decisions that the MPC are looking at.

Q102 John Mann: So at the current time you are suggesting by mid-February then?

Dr Carney: I am observing that, consistent with the inflation report—but I can assure you there will be a number of events that happen between now and then, as I also say in that

speech, that will adjust. If it looks like we are going to use up the slack in the economy sooner, we will adjust it accordingly.

Q103 John Mann: One big event that might impact on things—

Chair: No. You could not be referring to a general election, John, could you, by any chance?

John Mann: No, I am more interested in the next two weeks now. You have done all this forward guidance, but there are other events where there is scenario planning. We have relearnt today that it is outside the powers of any independent Scottish Government to guarantee that taxes will not rise or spending will not be cut in order to create money for reserves. That is not a guarantee that they can give because any other scenario is dependent on negotiations, which by definition they cannot guarantee. Why has all your scenario planning on Scottish options not been made public?

Dr Carney: We are moving from monetary policy to financial stability because in monetary policy we do not condition certainly our forecasts on the basis of political events. You would not expect us to forecast political events when we deal with realities that exist. Our contingency planning for financial stability purposes has been conducted. We have contingency plans and the reason we do not make them public is because they relate to specific institutions and specific situations and, from considerable experience, making plans public about specific institutions and situations can be counterproductive.

Q104 John Mann: But would it not be helpful for people in Scotland to see what some of the scenarios are in relation to some of the consequences, should they decide to change the status quo?

Dr Carney: I think the points I would make are that the Bank of England is a principal actor in terms of promoting financial stability. We are not the only one with responsibility, but we have considerable responsibilities for financial stability. We take those seriously, as you would expect, and you hold us to account on those. We have made contingency plans. We will be the continuing authority for financial stability, regardless of the outcome. Now, if it were to be a yes vote, we would be the continuing authority for 18 months, for that transition period. That is what we plan for and the people of the United Kingdom, regardless of where they live, can expect us to do that. They should expect us to do that. We are prepared. A judgment for the Scottish people, as per the previous discussions, is what happens after that and what plans are being put in place. I do not want to prejudge political discussions, but there are certain scenarios where the Bank of England has no continuing responsibility for financial stability in the medium term.

Q105 John Mann: It would be totally wrong for you or anyone involved in the Bank to either prejudge or to have a public view or a biased approach. However, is it in the public interest that the different scenarios of what might happen and its impact in relation to your work and the Bank's work are not made public?

Dr Carney: What we have made public are the very considerable economic issues that relate to currency arrangements, which we have discussed here today and on other occasions. What I think is in the best interests of the people of the United Kingdom with respect to the next few weeks is that they are aware that we are the continuing authority for financial stability in the United Kingdom, including Scotland, after 19 September, we have made contingency plans, we have considerable resources and we will co-ordinate with our partners.

Q106 John Mann: Your other three colleagues, would you anticipate that a vote for Scottish independence would impact in the short term on how you might use your vote on the Monetary Policy Committee?

Dr Weale: Could I say that I will do what I always do when I vote whether to keep interest rates unchanged or to change interest rates and that is to look at the data that we have, the way I interpret them and obviously something that we will know in the October meeting that we do not know now is the outcome of the Scottish referendum.

Q107 Chair: I expect that is what others will want to say. Is there anything anybody wants to add on top of that? Are there any other questions, John?

John Mann: No, I am listening for an answer, but I take it the silence—

Professor Miles: I think the issue is whether or not economic events play out in such a way that one's view on the outlook for the economy and where inflation is going, particularly a year, two years or three years down the road, whether that changes or not. Of course, things could happen. The oil price might move very sharply within the next few days. If that happens that would change one's view on the inflation outlook. That would have an implication for how you thought about monetary policy.

Q108 Jesse Norman: Just to return to some other questions, Dr Shafik, obviously you will have seen Martin Wolf's piece this morning in the *FT*, just pointing out that demand is down 5% in the eurozone over the last six years; unemployment is up 5%, inflation is basically flat. Is it not the case that the eurozone is at no little risk of deflation at the moment? How much of a concern is this to you and what would be the consequences for us?

Dr Shafik: Yes, you are quite right. The growth numbers for the eurozone in the last quarter were very disappointing, the inflation numbers were extremely low. The domestic drivers of inflation in the eurozone, particularly in the periphery but also more widespread, are very low. There is a risk of a prolonged period of very low growth and what has now been coined as "low-flation", not deflation but very low rates of inflation, which makes balance sheet adjustment, economic adjustment, much more difficult, particularly in the periphery. Clearly the ECB is very attuned to this and the recent actions that they took to lower rates by 10 basis points and bringing the deposit rates into very negative territory is important and the asset purchase scheme that they have announced is potentially very significant but, as the president of the ECB himself has said, monetary policy cannot solve

this alone and there is a need for complementary fiscal and structural measures in the key economies in Europe for this to be successful.

Q109 Jesse Norman: Has that been shared in your counterpart banks? Obviously the ECB, but do you share the view that the politicians are getting the message in these major countries? My impression is not in many respects. Germany is coming off the boil. France is in the doldrums. Spain and Italy, risky. We have seen the failure of a bank in Portugal. It is extremely worrying. Would you not agree?

Dr Shafik: Yes, it is worrying and I think what needs to be done is clear. There is a question about whether it will be feasible. I think you asked about the implications for the UK. I think the worrying thing for the UK is that it means our own recovery will continue to depend a lot on domestic factors. We have had some rebalancing away from consumption toward investment, with strong performance of investment in the recent period, over 10% growth in investment, which is very good, but the rebalancing that we had hoped for on the external side in terms of having more demand from external factors is not going to show up for a while, I am afraid.

Q110 Jesse Norman: Why do you think the eurozone “recovery” proved to be so ephemeral?

Dr Shafik: There are difficult structural reforms that have to happen in many eurozone economies and I think Martin Wolf’s arguments about the need for a more growth-friendly fiscal policy is part of the story, but I think there is a need for progress on multiple fronts, on fiscal policy, on structural reforms and on monetary policy. I think there has been an inability to co-ordinate those three. I guess now people are calling them the three new arrows, “the Draghi three arrows” like Abenomics, those three have been unable to be co-ordinated politically.

Q111 Jesse Norman: It sounds to me like you are coming close to the “throw the kitchen sink at the problem” approach that we sometimes see, rather than getting hung up on particular doctrine arguments within the economics profession.

Dr Shafik: I think you need action on all three fronts. I do not think it is just a demand side story or a supply side story.

Dr Carney: Let us call a spade a spade. One of the reasons why the eurozone recovery has been so weak has been the structure of the currency arrangements in the eurozone and the difficult adjustments that have had to take place in a number of large so-called peripheral economies to effectively have wage deflation in order to re-establish internal competitiveness. That is an extremely difficult dynamic to manage, as Dr Shafik rightly emphasises, if it is not accompanied by all other aspects of policy moving in the right direction, but I do not think we should under-play the contribution of those adjustments to the weakness of the eurozone.

Jesse Norman: We always like it when witnesses call a spade a spade.

Chair: It is those Scottish spades we were looking for.

Jesse Norman: We have been digging hard, but unable to locate them, but hopefully we will—

Chair: We have found a few.

Q112 Jesse Norman: One or two. Let us just focus on one other thing. Do you see any parallels, Governor, between the situation in the eurozone and what has been happening in Japan?

Dr Carney: There are some parallels. I think eurozone authorities are certainly aware of them. One of the key parallels has been the slow pace of recapitalisation of the banking system. Fixing the banking system was very slow in Japan in that period and handicapped the recovery; a similar challenge in Europe, which has now been seized very much through the stress test and the asset quality review; the need for structural reforms, the demographic and the need for structural reforms on the policy side, then the demographic dynamics in a number of eurozone economies also mirror some of the challenges with Japan, which just raises the bar for the policy response. I would not suggest that Europe is condemned to follow the same path as Japan, although the real GDP growth in Japan outperforms the eurozone thus far.

Jesse Norman: We should not look forward to the kind of prosperous stagnation that they have endured for the last 20 years?

Dr Carney: Yes. It is not a laughing matter, but it is still to play for.

Q113 Jesse Norman: Dr Shafik, can I come back to you then? Obviously the MPC picked up on the failure of the Banco Espírito Santo in Portugal. How far does the state of the European banking system give you pause and present a risk to the eurozone, do you think? Obviously we know it is a worry. The question is: how bad is it and was this a particular canary in the coalmine of something further to come?

Dr Shafik: This case in Portugal was a bank that was involved in connected party lending. They essentially lent to the family that owned the bank and created a €3.4 billion hole in that bank. The Portuguese Government has divided up that bank into a good bank and a bad bank and has done a sort of bail-in to deal with that problem. I say “sort of” because—

Jesse Norman: It sounds more like a bail-out to me, but yes.

Dr Shafik: I say “sort of” because the senior debtors were protected and put in the good bank and public money was put in place. I think the good thing is that, going forward after 2016, that sort of bail-in will not be allowed under the European rules for resolution and one will have to have a much cleaner bail-in. I think, going forward, one has a much better regime for resolving these cases.

Q114 Jesse Norman: In other words, it would be fair to say they are cutting the lines of toxic links between banks and Governments? You are nodding. As it were, that will become harder to do after the new rules are implemented.

Dr Shafik: Correct, after the rules of the BRRD and FSB are put in place.

Q115 Jesse Norman: Just one final question while we are on the banking system. Do you think there is a genuine risk of capital flight in Scotland if there is a referendum vote for yes, given the size of the Scottish banking system relative to the—

Dr Shafik: I will defer to the Governor on this one.

Dr Carney: The Bank of England is the continuing authority for financial stability after the referendum, irrespective of the result. Obviously our contingency plans that we have developed—we are not developing, we have developed—are there. We would implement when it is necessary.

Jesse Norman: The ones we are not describing.

Dr Carney: Yes, the ones we are not describing, but exist, we would put in place and that is the assurance we would give. I understand why you have been asking the questions. The issues we have been discussing relate to the medium-term arrangements, which are informed considerations, but they are the medium-term arrangements. The immediate issues around financial stability remain the responsibility of the Bank of England with respect to deposit insurance. It remains the responsibility of the FSCS, which is backed by the UK Government, and I can assure you that we have done our homework.

Q116 Jesse Norman: Just for the avoidance of doubt, the Scottish banking system dwarfs the size of the Scottish reserves, such as they are or appear to be. Therefore, there is a potential risk of capital flight and what you are telling us is that, among these contingency plans that you are not describing, there is cause for confidence that that capital flight features in your plans and you have a method of addressing it.

Dr Carney: The institutions in Scotland have access to Bank of England facilities. Depositors in Scotland are backed by the FSCS. There are reasons why we have contingency plans in place.

Jesse Norman: I am sure that will be of great comfort to those up north. Thank you very much.

Chair: Even by the usual standards of measuring each word carefully that we have come to expect on the MPC, we have had a double or treble dose today and we are very grateful for everything we have heard. The session has taken a bit longer than the two hours I normally like to limit these to but, then again, I think it was the measurement of each word that probably took up much of the extra 20 minutes. Thank you very much indeed for coming to see us and no doubt you will be before us again before too long and we are looking forward to a note first thing tomorrow morning. Thank you very much.