

Treasury Committee

Oral Evidence: Bank of England February 2017 Inflation Report, HC 1027

Tuesday 21 February 2017

Ordered by the House of Commons to be published on 22 February 2017.

[Watch the meeting](#)

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

Questions 1-118

Witnesses

I: Dr Mark Carney, Governor, Bank of England; Andy Haldane, Chief Economist and Executive Director, Bank of England; Ian McCafferty, External Member, Monetary Policy Committee; Dr Gertjan Vlieghe, External Member, Monetary Policy Committee.

Examination of witnesses

Dr Mark Carney, Andy Haldane, Ian McCafferty and Dr Gertjan Vlieghe.

Q1 Chair: Thank you very much for coming to give evidence this morning. We have another high-powered team from the Bank. We have the Chief Economist with us, so I thought I might open with a question to you, Mr Haldane. You caught the news recently with an allusion to weather forecasting. I wonder whether you would agree that economics, of its nature, is a Michael Fish profession.

Andy Haldane: Good morning, Chairman. Good morning, everyone. Economics is in part about forecasting, like meteorology, so in that sense there are some similarities. It is given to forecasting errors, as are weather forecasters. As with weather forecasting, the important thing is that we learn from those forecasting errors.

Over the years, we—not the Bank but the economics profession—have made some sizeable forecasting errors, the most notable of which, and the context for my Michael Fish comments, were those around the time of the global financial crisis. That was a very significant forecasting error: a forecasting error of around eight percentage points on GDP four quarters ahead.

What is more, and in some ways more telling, some of the ingredients of that error were predictable. The large rise in levels of leverage in the banking system was there for everyone to see, and they sowed the seeds of the crisis.

Q2 Chair: We had groupthink.

Andy Haldane: There was a degree of collective amnesia or oversight.

Q3 Chair: It was group amnesia. You could call it “group non-think”.

Andy Haldane: We have seen financial crises in the past, and their seeds are often sown in leverage. In that sense, some of the lessons of history had been forgotten to some degree not just by parts of the central banking community but across the policy community, across academia and elsewhere. That was a big error.

Actually, the reason I mentioned that Michael Fish moment was because that story had a happy ending. After the 1987 hurricane, meteorologists put a huge amount of effort into their models and their data, and that effort has now borne fruit.

Q4 Chair: They are largely forecasting natural phenomena, not behavioural phenomena.

Andy Haldane: Yes, quite so. Our problem is intrinsically more difficult than theirs, and therefore perhaps the scope for us improving is somewhat more limited than it is in the area of weather forecasting.



HOUSE OF COMMONS

Q5 **Chair:** That was what I was really asking. Is your profession a Michael Fish profession or, worse, is it one in which it is even more difficult to forecast? Is it one that is going to have plenty more Michael Fish moments, isn't it not?

Andy Haldane: It is one where errors will always be with us; that is absolutely true. Might they be larger than in weather forecasting? That also strikes me as likely or possible. Does that mean, however, that we should give up the ghost or that we cannot do better?

Q6 **Chair:** No, these are all questions I have not asked. You have raised one point that is very important. You have alluded to the inability to forecast or give any indication of what was coming with the financial crisis. Is it really not in the areas of financial crises and household expectations that we most need high-quality forecasting but where it tends to be in shorter supply? Are you going to be able to get an improvement, even if you do put in that Michael Fish-style huge increase of resources into the job?

Andy Haldane: Taking seriously financial factors, the role of banks and the role of financial markets in driving the fortunes of the economy, big improvements have been made, including by the Bank in having more of that as part of our core forecasting machinery.

Q7 **Chair:** Past mistakes are not a guide to future performance. We are going to have an improved outcome.

Andy Haldane: We should hope and aspire to doing better than we did then, because we have learnt some of the lessons from that experience. Ditto when it comes to issues of consumer behaviour and possibly irrationalities around that behaviour—we are taking those more seriously than in the past, too.

Have some improvements been made? I would say, certainly, yes. Is our forecasting framework somewhat better? Yes. Is there loads of scope to continue to improve that in the period ahead? Yes, I think. Our research agenda that we set out a couple of years ago was very much in the spirit of that continuous improvement in the methods we use for forecasting and for other things.

Q8 **Chair:** Others may want to come in later on this subject, but I am not going to prolong it, except to say what I often say about forecasting. The one thing you know about economic forecasting is that it is going to be wrong—and usually very wrong. I am a deep sceptic about the scope for long-run improvements to it. It is not really my job to offer views at these meetings, but that is the reason for not prolonging the exchange.

Can I turn, though, to one particular aspect of the forecast, Mr McCafferty? In the Inflation Report there is an interesting box. If you turn to page 20, you will see that. I am sure you know it very well already. The box sets out a change in your forecasting assumptions, and it is a very important one that is tucked away there. Did you support the reduction in the equilibrium rate of unemployment from 5% to 4.5%?



HOUSE OF COMMONS

Ian McCafferty: I support the reduction, but I have some reservations about the magnitude of that reduction.

Q9 **Chair:** Okay, just for those listening, this used to be called—you might tell me it is technically slightly different—NAIRU. I note that we are now being asked to call it “U*”, but we are talking about the same thing. It is a crucial assumption at the heart of modern economics.

Ian McCafferty: It is, yes. NAIRU and what we deem U* are fractionally different in small, technical definitions, but I will not trouble you with those at this stage. But in terms of the changes, as I say, having looked at recent evidence on the economy, there are some very compelling reasons to suggest our assumption about the equilibrium rate of unemployment at 5.1% was perhaps higher than was being suggested by some of the evidence.

However, I do have some modest reservations about, as I say, the degree to which we have reduced it, to 4.5%. I would have personally preferred a reduction to probably 4.75%, but, as I say, we work the forecasts on the basis of the best collective judgment—and on that basis I am happy to run with this. We will observe as we go forward as to whether that 4.5% is fully justified.

Essentially, judging the equilibrium rate of unemployment—what we call U*—is difficult. It is only observable in terms of the performance of the rest of the economy. It is not something that can be measured independently. There are various different ways in which you can try to assess U*. One of the reasons why we felt a reduction was required is that, if we look at the performance of wages over the course of the recent past, they have come in consistently somewhat weaker than we would have expected on the basis of an equilibrium rate of unemployment of 5.1%.

Chair: That was shown in the bar chart two pages back.

Ian McCafferty: Exactly. But looking at the weakness of wages is only one way of trying to get at the underlying level of U*. To my mind, at least, some of the other evidence—this is where my judgment differed from some of the other members of the committee—particularly looking at some of the physical rather than the price measures of the labour market, in terms of skill shortages, the level of vacancies and these sorts of things, suggested that we might be somewhat closer to full employment than the underperformance of wages would allow.

There are some other potential explanations for why wages have been so weak, not least because nominal inflation has been so low over the course of the past couple of years or so. Until we can dismiss those, I would be slightly more cautious in terms of how far we reduce the equilibrium rate of unemployment—although I agree with the reduction from our previous assumption.



HOUSE OF COMMONS

Q10 **Chair:** You voted for the reduction from 5% to 4.5%.

Ian McCafferty: I accepted it on the basis of the best collective judgment.

Chair: You voted for it.

Ian McCafferty: We did not have a formal vote in the way we vote for interest rate changes. I accepted it.

Q11 **Chair:** I am reading from Kristin Forbes' speech. She says, "The majority of the MPC voted to lower our estimate of U^* to 4.5%", which suggests there was a vote and that there was a minority who did not vote for it.

Ian McCafferty: We are asked for our view, and I dissented from the 4.5%, saying that I would prefer 4.75%, but that is not the same as having a formal vote, as we do on interest rates.

Q12 **Chair:** Okay. You had an informal vote, in which you voted against 4.5%.

Ian McCafferty: Yes. I suggested I would prefer 4.75%.

Chair: You would have voted for 4.75% if it was on offer.

Ian McCafferty: Yes.

Q13 **Chair:** You are one of the dissenters—one of the minority.

Ian McCafferty: Yes.

Chair: How many of there were you, the minority?

Ian McCafferty: Certainly, Kristin and I felt that a slightly more cautious reduction, at least in the first instance, was justified. There were some who were unsure between 4.5% and 4.75%. Some were arguing that it could be even lower than 4.5%, but certainly the two of us expressed some dissent.

Q14 **Chair:** Let us have another go. How many dissented from the view that it should be moved to 4.5%?

Ian McCafferty: My recollection is that Kristin and I dissented.

Chair: It was only two of you.

Ian McCafferty: In terms of strong dissent, yes.

Q15 **Chair:** When was this assumption last changed, Mr McCafferty?

Ian McCafferty: The 5.1%—it was certainly before my time on the Committee, Chairman. I do not remember exactly when it was.

Chair: I will go to the Chief Economist on this, because that really is right up his street. When was it last changed?



HOUSE OF COMMONS

Andy Haldane: I will need to go back and check. It is well before my time on the committee. I would imagine it was well before anyone currently on the committee's time, to be honest.

Chair: I would just like an answer to that question, Governor, rather than wider issues. You have been trying to get in for some moments. When was it last changed, Governor?

Dr Mark Carney: When I arrived, staff refreshed what they thought U* likely was, and it was generally held to be around 5% to 5.5%.

Q16 **Chair:** It was reviewed but not changed. I do not want to spend a long time on this topic.

Dr Mark Carney: I am afraid you are getting a slightly longer answer, Chair.

Q17 **Chair:** I would be grateful if you would shorten it. I want to know the answer to the question. If you do not know the answer to the question, please say, "I do not know", and then you can write us a letter and give it to us.

Dr Mark Carney: I do know the answer, and I am going to provide it to you, if I may. I do not need to write a letter; I know the answer. I can write it down as well.

It was between 5% and 5.5% previously. Of course, at the time the rate of unemployment was much higher, so it was slightly academic at that point. In the subsequent year, 2014, we decided as a committee that we would institute regular annual stocktakes of the amount of supply in the economy so we did not take important decisions such as this on what could appear to be an ad hoc basis.

We do a comprehensive review of all aspects of supply in the labour market, in firms and in productivity, on an annual basis. This is part of the supply stocktake. There were adjustments to three important variables: unemployment, productivity and—

Q18 **Chair:** We are not going through all that now. It is very kind of you to offer such very detailed information. We certainly would like it, and it would be a matter of public interest. Perhaps you would jot that down in a letter to us. There will be a lot of colleagues who want to be getting in.

The shorter answer is that it was 5% when you arrived. When you arrived, you instituted annual reviews of it.

Dr Mark Carney: They are comprehensive annual reviews.

Q19 **Chair:** Before you were here, those were not taking place, since you have just said they were instituted. You were going to tell us, although you do not know, when it was last changed from 5%.



HOUSE OF COMMONS

Dr Mark Carney: It was prior to my arrival. I will find out. I will tell you, Chair, the committee never would have revealed its view on what this was.

Q20 **Chair:** Has this ever been voted on?

Dr Mark Carney: The way we construct our forecast is we discuss the key elements of it. We have analysis and robust discussion, and then we come together and try to form a consensus—a best collective judgment—on the forecast. There are different views on different aspects.

Chair: The question was a much simpler one, Governor. I was only asking you whether it had ever been voted on.

Dr Mark Carney: It has been reviewed regularly. There has been some discomfort from a number of committee members over the last few years that it has been too high.

Q21 **Chair:** But there is nothing that has been described as the dissent Kristin Forbes is referring to when she says that there was a vote.

Dr Mark Carney: Chair, it is reviewed annually.

Chair: Okay, I have got that.

Dr Mark Carney: A collective decision is made. That is the better way to describe it.

Q22 **Chair:** This matters a lot, does it not?

Dr Mark Carney: It does matter a lot, which is why we do it.

Q23 **Chair:** The Bank of England can allow forecast growth to rise without inflationary consequences once you have lowered this number. Indeed, that seems to be the crucial ingredient for your making assumptions on whether to raise interest rates.

Dr Mark Carney: That is not right. That is a total mischaracterisation. The Bank—the MPC, more precisely—has been over-predicting wage growth consistently for the last several years.

Chair: We have discussed that.

Dr Mark Carney: That is the important point. The question with forecasting is whether you learn from past errors—whether you sit back, assess them, make a judgment, do the research and then make what are difficult judgments. That is what we have done in this case. The last point, if I may—

Chair: Okay, that is all—

Dr Mark Carney: No, this is an important point from a policy perspective, if I may, Chair.

Chair: Yes, very quickly.



Dr Mark Carney: We have to be very clear about those important judgments so that reasonable people can take a different view; they can anticipate what that consequence would be for policy. It is very clear in the monetary-policy statement that this is one of the three most important judgments we have made. If wages do not follow a pattern consistent with this changed assumption, it is likely to have consequences for the path of monetary policy. That is how you square forecast uncertainty and actual policy.

Q24 **Chair:** Mr Haldane, do you agree that the stimulus effect of the Autumn Statement, which is £23 billion over five years, will have a nugatory economic effect?

Andy Haldane: In the course of the February forecast round, we looked at the impact of the Autumn Statement on our growth projections. As context, we revised up our expectation for growth three years hence by around 1%. Of that 1% upwards revision, we thought roughly half could be accounted for by the impact of the changes in the Autumn Statement.

Chair: It will have a big effect, then.

Andy Haldane: It will have a material effect, yes.

Q25 **Chair:** You disagree with the OBR when they say the effect of the value of this is 0.1% of GDP.

Andy Haldane: No. We compare notes with the OBR very closely when it comes to assessing the impact of any fiscal measure on the UK economy. Broadly speaking, we are in a similar ballpark when it comes to the marginal impact of fiscal-policy changes on the economy. As you know, there is a high degree of uncertainty around those fiscal multipliers.

Q26 **Chair:** Yes. What was the unique property of this £23 billion, which has been so much more stimulative as far as bank forecasting is concerned than for the OBR?

Andy Haldane: It was not just the infrastructure change that was made. That was just one of the ingredients.

Q27 **Chair:** We do need more of this magic stuff, do we not? If we can get this big kick out of £5 billion, we should try to find some more.

Andy Haldane: One place where our forecasts for the impact of fiscal policy do differ somewhat from those of the OBR is in the speed of transmission of fiscal impulses to the economy. Despite that net fiscal loosening in the Autumn Statement, it still is the case that we are going through a persistent period of fiscal contraction. There is still a net headwind from fiscal policy embedded in our forecast, albeit a somewhat lesser one than was the case in the past.

But the short answer to your question is that the Autumn Statement announcements were a significant contributor to our upwards revision in



HOUSE OF COMMONS

our GDP projections in February, of which infrastructure was a component.

Q28 **Chair:** Mr McCafferty, you voted against that August stimulus package. You thought it was a bad idea, did you not?

Ian McCafferty: I voted against part of it, Chairman, not all of it.

Chair: You voted against the gilt proposals.

Ian McCafferty: Yes.

Chair: Given what we have had now as an outcome, have you not been proved right?

Ian McCafferty: I would hesitate to say I have been proven right. The economy has performed slightly better than the initial indicators after the referendum had suggested. If you cast your mind back to July and August, when we were in the process of doing the August forecast, all of the survey indicators, which was all we had to go on at that time, were extremely negative. They then managed to bounce back over the course of the autumn.

The economy has sustained itself somewhat better over the course of this year. That does not mean I would necessarily reverse what we did in August. In fact, as of the last meeting, I voted to maintain the current stance of policy on the basis that one of the factors—although I would not wish to overclaim on this—that has helped sustain the economy through the autumn was the decisions we made in August.

At that time, I felt the risks to the economy were perhaps that the surveys were somewhat overstating the potential downturn in the short term and, therefore, I wanted to see a slightly smaller quantum of total stimulus, which is why I voted for the reduction in Bank Rate but against the additional QE.

Q29 **Chair:** I have not asked you anything at all yet, Mr Vlieghe. I am sure you have been listening attentively to all of these exchanges. Is there any particular point you want to pick up now before I bring in other colleagues?

Dr Gertjan Vlieghe: On the judgment about U*, I wanted to point out that I was comfortable with the judgment to lower it to 4.5%, because I thought there was a range of evidence. Some of it suggested a smaller reduction, but some of it suggested a bigger reduction. I thought a central view of 4.5% was appropriate.

I also wanted to talk about this confusion about whether we voted or whether we did not vote. In some ways, every forecast discussion is a sequence of informal votes. We have a bunch of scenarios. We go around the table and we ask people what they think. Do people generally agree with us? Do people want something stronger? Do people want



HOUSE OF COMMONS

something weaker? We keep circling around in order to get to the best collective judgment.

It is lots of votes all the time; they are just not formally recorded. They all have the feeling of going around the table and asking whether people agree with what is on the table. We keep going around until there is a majority agreement for what is on the table. This was not any different from how we conduct any other part of the forecasting.

Chair: I am picking up on a word in a speech from one of your colleagues. That is why I have been asking the question.

Q30 **Stephen Hammond:** Good morning, gentlemen. Thank you for coming to speak to us this morning.

Professor Haldane, can I pick up on your first response to the Chairman's question? You said you chose Michael Fish because the story had a happy ending and it allowed people to learn things. Could you just briefly outline whether or not you have learnt anything, in terms of forecasting, regarding the short-term and long-term effects of particular things or any action within an economy? Also, could you explain whether or not you think it is important to size in behavioural economics to a greater extent than you had done previously to your forecasting?

Andy Haldane: You referred to short- and long-term effects. Do you mean of any particular event or in general?

Q31 **Stephen Hammond:** Classically, in your forecasting you would have had an interest-rate effect, for instance, and then lags through the economy on demand or whatever. I am just asking whether or not you have looked at changing those lags and how that affects other determinants—so we can get some impact about how, when you are forecasting in the future, we should judge some of those forecasts.

Andy Haldane: Yes, so both the shorter and longer run dynamics of the economy are features we keep under almost continuous review. Perhaps to bring this to the here and now, the present, I could take our forecast over the last 12 months and, in particular, assessing the impact of the referendum and Brexit.

There is a useful distinction there between short-run dynamics and long-run dynamics. We formed a view in the immediate aftermath of the referendum about what the range of possible long-run impacts of that might be. It was quite a broad range, because quite a broad range of possibilities are out there. We have not fundamentally changed that view on the long-run impact, not least because we do not have much extra information thus far on how that might look.

Have we, however, changed our view somewhat on the shorter run dynamics? Yes—that is one of the reasons near-term growth forecasts have been revised up. We have looked very hard at what the contributors were to those upwards revisions. The lion's share is genuine



HOUSE OF COMMONS

new news, including our August monetary policy package and the Autumn Statement fiscal loosening I mentioned.

Q32 **Stephen Hammond:** But some of it has been consumer spending and consumer confidence.

Andy Haldane: It has.

Q33 **Stephen Hammond:** You could argue that behavioural economics ought to have taught you that some of the people who voted regarded Brexit as a good thing rather than a bad thing—and the stable view was a bad thing. Therefore, had you had a scenario with it as a good thing, you might have been closer to the forecast.

Andy Haldane: Yes, that is all fair. I was going to get to your precise point in a second. I was just going through the decomposition.

Some of it was new news, monetary stimulus and fiscal stimulus. Some of it is the stronger world. The world is truly brighter than would have been the case six months ago. That is a good thing for the UK as well. There is a bit left, which, as you say, is a somewhat stronger consumer—and, within that, a somewhat stronger housing market—than we had foreseen. That is a learning for us.

One way of making sense of that is, as you say, to look in much more granular detail—it is microscopic detail—at the behaviour of individual consumers and individual companies. This is something we do. You will see there is a lot of talk about this in our regular quarterly report. We have a regular survey of households. We have a range of regular surveys of companies. We have drawn on those very extensively when trying to figure out how consumers and companies are reacting to the news that they have had.

It is certainly true that a majority of consumers so far have looked through the impact of what we have seen over the last six to nine months. In some ways, perhaps that should not have been a surprise, because there are more people in jobs than was the case nine months ago. Wages are still going up; real incomes have been growing.

To your point, behavioural economics perhaps can tell us quite a bit about that: people spend what comes in. That is now, however, about to change a bit, as their incomes are squeezed by the rise in prices. We think that will have some impact in throttling back consumption. Are there learnings from behavioural economics? Yes, absolutely. Some of that can come from our more granular household and company surveys that we carry out.

Q34 **Stephen Hammond:** That squeeze on real wages may, of course, teach you to look at a lag effect on some of the impacts as well. It may well be that the more negative impacts of Brexit are about to hit the economy, rather than hit straight afterwards, for instance.

Andy Haldane: Yes.



Stephen Hammond: I note the Governor wanted to come in. I then wanted to ask Mr McCafferty a question.

Dr Mark Carney: Just briefly, I agree with what my colleague just said. I just have two supplementary points, if I may. The first is just to remember what happened to consumer attitudes in the immediate aftermath of the referendum. There was a very sharp fall in consumer confidence in the immediate aftermath of the referendum.

That would be consistent with not everyone having voted in the direction of the majority. You can have a majority that maintains confidence, but if there is a reduction in confidence among the 48%—let us put it that way—then for the macroeconomic—

Stephen Hammond: But overall consumer confidence has been—

Dr Mark Carney: I am sorry. Can I make my second point? This is part of the reason why the Bank acted as forcefully as it did both in terms of macroprudential policy, by loosening capital requirements, and monetary policy. We saw a rebound in confidence quickly after that. Just like Mr McCafferty, I am not ascribing that solely to the Bank. It is part of a series of events that helped re-establish confidence.

The important learning point, which is my second point, goes to a forecasting point. We looked at the uncertainty about future outcomes. There is a wide range of possibilities for how Brexit will evolve and how that uncertainty will affect businesses versus how it affects households. Particularly for households, if that uncertainty is not accompanied by a tightening of financial conditions, they look through it. It is entirely understandable, because, as Mr Haldane just said, they are in jobs; wages are growing roughly as before; and the economy is growing. They look through it, and they think it is right and positive for the economy.

We were able to help decouple—and in fact we did decouple—financial conditions from that spike in uncertainty, because financial conditions eased materially after the referendum, helped by the actions of the Bank of England. What we missed in our short-term forecast was that this would happen to the extent that it did because we had a bigger impact than we might have anticipated in August. We also missed that it would have as big an impact on consumer behaviour, to get to your behavioural point, as it did in those subsequent quarters.

We have learned from that, and we have detailed that in various publications, speeches and other things. It is just worth getting on the record that that is one of the things we have appropriated from it.

Q35 **Stephen Hammond:** Thank you. Mr McCafferty, could I ask you a question? In response to my question, you obviously heard Professor Haldane say they were going to use more granularity in looking at consumer surveys and business surveys. In a speech in December or November—it was the back end of last year, anyway—in Dorset you raised scepticism about the validity of business surveys. I wonder



whether you care to explain that remark in the context of Professor Haldane's remarks.

Ian McCafferty: If I could just clarify what I did say a little bit, it was not to raise general scepticism about the role of business and consumer surveys. I spent a good deal of my professional life working with business surveys when I was Chief Economic Adviser at the CBI. I would be the last to condemn their use. They are extremely useful for the economy.

What I did say was that at times we have extremely unusual shocks to the economy. I class the referendum result as an unusual if not almost unique shock to the economy, in the sense that it only happens once in a lifetime or once in a generation. We have seen some other different but similar unusual shocks such as 9/11, the East Asian crisis of 1997 and so on and so forth. At those specific periods, over the very short term, business surveys can give you somewhat misleading signals. The shock to sentiment tends to spill into the very short-term responses to more real economic indicators—prospects for output and prospects for investment—simply because people are very unsure about what is going on. We have to understand that when trying to interpret these surveys over the very short term.

To paraphrase what the Governor said, we did see very sharp falls in consumer confidence, business confidence and expectations about growth in output over the second half of the year in the surveys immediately following the referendum result. Those then, as it were, restored themselves as the autumn went on, partly as a result of exogenous factors such as our change in policy and changes in financial markets. I would not wish to cast aspersions on the general use of business and consumer surveys, but there are times when you have to be very careful in interpreting their signals.

Q36 **Stephen Hammond:** The view we should take is that there is an overreaction to an event and then we get back to an equilibrium value.

Ian McCafferty: Sometimes, yes—and it is something we have to be aware of.

Q37 **Stephen Hammond:** Dr Vlieghe, the forecasts for 2018 and 2019 are still somewhat weaker than what you were forecasting prior to the referendum, as a group. Do you remain confident in those forecasts? Are you concerned that there may be something overall the Bank is missing or a systemic error somewhere in the forecasting?

Dr Gertjan Vlieghe: I am never confident of any forecast, and one of the things we risk every time there is what we call a forecast error—and “forecast error” means the outturn is different from the central projection—is thinking, “If only we had had a better model, we would not have made that forecast error”. That kind of attitude is going to lead to persistent disappointment.



HOUSE OF COMMONS

I completely agree that when there is a forecast error we need to learn from it. We need to make sure we are exploring all available data and that we are not locking ourselves into thinking about an economic structure that is no longer applicable etc. We do those things all the time, but it is still going to be the case, even after we do all that, that there are going to be large forecast errors. We are probably not going to forecast the next financial crisis, nor are we going to forecast the next recession. Models are just not that good.

I also want to point out that it is also a mistake to think our forecast is the product of a model. Our forecast is a product of a sequence of judgments, which are disciplined by a few models to make sure we do not make mutually inconsistent judgments. In the end, however, we have to look at lots of data, have lots of in-depth discussions and do lots of analysis. There is not one model that is right or wrong. It is not the case that, if only we had found a slightly better model, we would not have made the mistakes we have made. Some of this discussion is leading to unrealistic expectations about what we are going to get from economics in the next five years.

Q38 Chair: It might be helpful if the Bank could try to influence those expectations.

Dr Gertjan Vlieghe: We do. This is why we always show fan charts, and this is why we never cease to explain that the central projection is always going to be wrong. It is a probabilistic assessment, not—

Q39 Stephen Hammond: The difference between our side of the table and your side of the table, Professor Vlieghe, is that you said at the beginning that you had no confidence in forecasts, but we would have said we have no confidence in anyone's forecasts but our own. That is the difference.

Nonetheless, is there anyone on the panel who thinks the forecast for growth turning out to be too pessimistic had any major negative impact on policy decisions?

Dr Mark Carney: No.

Andy Haldane: No.

Chair: We will move on.

Q40 John Mann: Dr Vlieghe, I was struggling with your last answer. I fully heard what you said, but you were party to the decision on the equilibrium unemployment rate, which is precisely tinkering with the model to try to get the model right. You are dissing the very process you have just endorsed.

Dr Gertjan Vlieghe: I do not agree with that at all. What I said was that it is important to try to keep improving the model, the framework, the thinking and the understanding of the analysis—and we do that all the time. I was cautioning against the idea that, once we have done that sufficiently, we will then no longer make forecast errors, because that is



patently never going to be the case. I was cautioning against the idea that, if only there was a better model, we would no longer make mistakes or forecast errors.

It is also important to make the distinction between a mistake and a forecast error. Since a forecast is a probabilistic assessment, once the data deviates from the central forecast you cannot say that it was therefore wrong. You need to run it hundreds of times before you can decide that you are making a systematic mistake on one side or the other or your mistakes are systematically bigger than someone else's, which is the definition of a bad forecast. A forecast error is not a bad forecast.

- Q41 **John Mann:** Yes, but you are party to tinkering with the equilibrium unemployment rate, when there is no predictable employment pool. There has not been a predictable employment pool since 2003.

Dr Gertjan Vlieghe: I do not follow your reasoning. Are you saying we should throw up our hands and say, "Well, it is all terribly uncertain and there is nothing we can do"?

- Q42 **John Mann:** No, but prior to mass migration—I mean actual free movement of significant numbers of people across all different kinds of pay ranges, professions and jobs—there was a fixed employment pool. In other words, it was predictable. Now, there is not. There has not been one particularly since the significant changes in inward migration from 2003 onwards.

When you are trying to predict unemployment in any way, you are not dealing with the same thing. The model is entirely almost out of the window, because there is no fixed employment pool anymore. Employers can bring in who they want.

Dr Gertjan Vlieghe: For monetary policy, it is not important whether there is a fixed employment pool. It is important for us to be able to assess the amount of slack. As we have said many times before, when, for example, there are large inward migration flows, those people bring more labour supply but they also bring demand for the economy. They do not necessarily have a first-order impact on the amount of slack in the economy, which is ultimately what matters for monetary policy.

- Q43 **John Mann:** But slack, productivity and wage rates are fundamentally affected, are they not, Governor, by the numbers of people available to employers to bring in? We are comparing apples and pears by comparing pre 2003 to post 2003, in the sense that employers are bringing in vast numbers of people as they want. They are able to and have been recruiting in a totally different way. Therefore, it is hardly a surprise that the models that are there become unstuck. There is a danger of looking at the wrong things, almost through an old paradigm.

Dr Mark Carney: You raise a number of important points, but we have to be on the same definitions. In terms of the unemployment rate, that is the proportion of those in the labour force who are unemployed,



HOUSE OF COMMONS

whether those individuals in the labour force are UK nationals or foreign nationals who are looking for work here. That is the measurement about which we are making a judgment. I will not go over the judgment we have made, unless you want to go back into the detail on that.

Your point, though, in terms of a shadow labour force of migrant workers across all skill levels adding an additional proportion of slack to the labour force is a valid one. It is a valid judgment. We have to make a judgment about that and about any potential structural change to that labour force that could evolve over our forecast horizon. I will come back to that in more detail, but we have looked at the impact of migration in aggregate on inflation, which ultimately, as you know, is our target.

In May 2015 we had a box, which was based on pretty extensive analysis, that indicated there was a marginal impact on inflation at the two- and three-year horizon. It was a 0.1 difference. That was because of the additional slack, obviously, bringing some downward pressure. However, the demand that came with those workers brought upward pressure, and they largely cancelled out.

We have to be conscious. This is something to which we will have to pay particular attention in the coming years, if there is, as is to be expected, to be some adjustment to the nature, scale and magnitude of inward migration to this country, and whether it has a macroeconomic impact, ultimately an impact on inflation, once you take account of both the supply and demand sides.

The equilibrium rate of unemployment is a related but separate issue.

Q44 John Mann: Mr Haldane, earlier you were trying to throw your weather remarks back to 2008, but in fact when you raised them, and in the questions you then answered, your remarks were equally applicable to last year. The free flow of labour and the pressures that brings on the labour market affect individuals' behaviour and their responses. But that does not seem to have been taken into account in terms of the very inaccurate projections that were made in relation to the referendum.

Andy Haldane: Let me pick up on one or two of those points. First, for the avoidance of doubt, I was drawing a distinction between our learning from the time of the global financial crisis—it was a big one, a massive error, with big learning, to which we and others have responded—and the events of the last six to 12 months, where the error was on nothing like the scale. Quite a lot of what we have learnt is basically new news, including policy changes. Those are quite important distinctions.

When it comes to the labour market, I do not want make the forecasting thing sound like a counsel of despair, because it is not. Our underlying framework, which is one around demand and supply, is largely intact. There are different judgments on what the drivers are, for example, of the demand for labour and the supply of labour. You mention one or two very important structural forces that are reshaping—



Q45 **John Mann:** I just asked about consumer behaviour, and it is consumer behaviour that you appear to be misjudging.

Andy Haldane: People's jobs and their incomes, plainly, are a very important shaper of that. For example, it might be an issue about structural shifts. You mentioned one, which is rising levels of immigration. Let me mention a second, which is the rising levels of job insecurity—the rise of the gig economy or the sharing economy. Has that had an impact on wage growth? Yes, we think it probably has. Has wage growth, in turn, had an impact on our views on the NAIRU or this U* concept? Yes, it has.

Does it impact, prospectively, on amounts of consumer spending? Prospectively, yes. We are taking some of those long-run structural shifts in the jobs market into account when we are judging things like wage growth, incomes and spending. Is that a learning exercise, given that those shifts are big and ongoing? Yes, it is.

Q46 **John Mann:** Mr McCafferty, you and Mr Haldane have quite a different perspective on business surveys. In those business surveys in the aftermath of the referendum, would it not have been reasonable to predict that those filling in the surveys have the same emotional responses as the rest of the population? They are not necessarily the same as one another, but they would see and contemplate any shock, any surprise, and act with that emotion in terms of their immediate thought process, in the same way that politicians, many others or perhaps everyone in society does as well.

Ian McCafferty: It is clear that the business surveys immediately following the referendum result did suggest that businessmen were going to take a rather less upbeat view of what was going on, going forward, not only in terms of output but also in terms of their hiring intentions. Those then recovered later in the autumn. The initial reaction on the part of both consumers and businesses was relatively negative in the immediate aftermath, but then it rectified itself.

It is very easy with hindsight to look back and say, "Well, things have turned out differently", but at that time the evidence suggested the shock of the uncertainty of the referendum result was going to have a material impact on the rate of growth. We have now learnt that some of that has been mitigated by external factors: the movement in financial markets, the depreciation in sterling, the actions we took back in August, what the Chancellor has done on fiscal policy—all of which have helped stabilise confidence and drive the economy forward as we have gone through.

It is very difficult to simply say that people react with psychology. Of course they do—but you need evidence as to what that psychology leads to in terms of behaviour. You started by saying that we tinker with the model, but what we are doing is learning, as a result of experience and evidence, how the economy is evolving and how it has changed as a result of changes to the structure of the labour market, and we are



HOUSE OF COMMONS

adapting our judgments as to the forecast as a result. I am not sure what else you would expect us to do.

John Mann: You take it as a criticism; it is an observation.

Ian McCafferty: I do take it as a criticism.

Q47 **John Mann:** My final question is to you, Governor. I know you will be as delighted as we are that we are now seeing clearer public differences of view within the MPC, rather than the feared groupthink we had often, me included, suggested might be a problem. That is healthy. I am sure we could all agree on that.

But in terms of whether you are looking at all the right things, I recall quite some time back—I cannot recall how many years back—listening to Kate Barker on her *Review of Housing Supply*. In the intervening period, home ownership in this country has fallen by an unprecedented and record amount—yet the promotion of home ownership was part of the review. That is in a relatively short period of time, yet we are seeing in your Inflation Report, again, changes on behaviour on the housing market as a key factor in how things are turning around. Is there not a danger that the models you are operating, and what some of us have called the “groupthink”, are behind the times in terms of where the public is?

On this point about the housing market, what is one measuring in the same way, when there has been this huge change? Do you and others not, therefore, need to be doing far more work analysing how consumer behaviour is changing, how it might change and what, in fact, consumer behaviour is?

Dr Mark Carney: I have three points. First, just on the survey point, if I may, the surveys at the time, across all the surveys, at the time we took the August decision, predicted recession. If you map the historic relationship, they predicted outright recession. We aimed off of that. We did not think the economy was going to go into recession, we aimed off, and we had mild growth for the second half. We were towards the top end of forecasters at the time.

We clearly did not aim off as much as we should have. We should have been higher, in retrospect. We did contribute something to that outperformance. I will not try to quantify it, but we did contribute something to it. It is important just to get that there.

Secondly, on the housing market, you are absolutely right: there has been a big structural shift in terms of the proportion of home ownership, millennial attitudes towards ownership and rent. The carrying cost of housing for individuals has persistently gone up. We do use things such as the survey we conduct with NMG on an annual basis, which looks at up to 10,000 homeowners. We try to get into exactly these types of issues. How are individuals going to react to an increase in the price of homes,



HOUSE OF COMMONS

an increase in the price of rents or changes to interest rates in either direction? How symmetric or asymmetric is the response?

We try to understand through survey evidence and then, layering on top of that, by going out and talking to people around the country. We should get to that at some point, in terms of what we do with our agents and what we do as individuals to go around the country and talk to people about exactly these issues. We do this to understand how these could affect behaviour, with policy moving in either direction.

Your bigger point is absolutely right: do we think we have a perfect model of the British household? No. Do we think we have a perfect understanding? We have to supplement our understanding with a variety of satellite analyses and face-to-face discussions.

My last point, which was an earlier point that was raised, is that we might understand that no forecast is a prediction or is perfect and that there are probabilities around there, but that is not what people hear. Do we need to do a better job of explaining what the forecast is and what the different possible scenarios are for the economy? I will stop on this point. We have been here for an hour. These are all great questions, but we have not talked about the various different scenarios that could transpire for this economy in the coming few years and what that could mean for monetary policy. That is something we at least started to set up with this monetary policy report.

Q48 Chair: We are running slightly behind schedule, so I would be grateful if colleagues could ask brief questions and you could try to make—even though your answers to these questions are very interesting—your replies slightly shorter.

On the agent question, for several years I have asked the Bank to take a look at what can reasonably be published. I realise some of this is commercially confidential and some of this information cannot be disclosed for other reasons. But you are probably the premier collector of this kind of information in the country now. It was something you did not have at all in 1997, and it has been built up steadily since then. It is a great source of information and of wider interest to the economy and can improve economic performance.

Could I ask you to undertake a study of that internally and come back to us with any improvements in the level of disclosure in due course? Maybe it would need to be led by the Chief Economist.

Dr Mark Carney: I have one very quick point on that.

Chair: It could be quick.

Dr Mark Carney: The agents are setting up a new decision-maker panel. It is going to be one of the most comprehensive groups of business surveys and of CFOs of companies, large and small, across the country. The initial findings of that—the first 750; it is going to be much bigger



HOUSE OF COMMONS

than that—are in this report. We published it precisely for this reason. It is a little premature to put it out, but it is to start getting the information out. That is one example.

Chair: It is the regional impact, too, which is often of greatest interest to the Commons.

Dr Mark Carney: I understand.

Q49 **Chris Philp:** The most recent minutes of the MPC said there are limits to the extent to which above-target inflation can be tolerated. Mr McCafferty, what are those limits?

Ian McCafferty: Those limits are the extent to which we see the above-target inflation, which we are already close to experiencing, start to change behaviour and attitudes—and, in particular, inflation expectations. We have seen inflation expectations start to rise, but only from below-average levels back to levels I would still judge to be consistent with the medium-term achievement of our 2% inflation target. Were they to rise further and people were to fear the above-target inflation were not to be temporary and would become more ingrained, we would have to become rather more worried.

Q50 **Chris Philp:** It sounds to me like you are saying that we are on the cusp of the limits to that toleration being breached.

Ian McCafferty: I am not sure I would want to speak for everybody on the committee, because there are different views.

Chris Philp: I am only asking you.

Ian McCafferty: Yes—we are closer to those limits of tolerance than we were six months ago.

Q51 **Chris Philp:** Governor, would you agree with your colleague Mr McCafferty that we are on the cusp of breaching the limits at which above-target inflation can be tolerated?

Dr Mark Carney: I think Mr McCafferty clearly said he did not want to say that, and I will leave his words to stand on the record.

With respect to limits, I agree in terms of looking closely to inflation expectations. We all agree on those points. Secondly, we have to look at the causes of the overshoot. Why is inflation overshooting? Is it overshooting because of pass-through of the exchange-rate depreciation or are domestically generated inflationary pressures contributing to that overshoot? Those are two very different situations.

The third point is: what is the degree of slack in the economy at the time? After all, the only reason we are tolerating this overshoot is because we are trying to balance, under exceptional circumstances, the overshoot versus the degree of slack.



Q52 Chris Philp: On that second point, can you comment on your view of the extent to which the overshoot is caused by currency-related pass-through versus domestic inflationary pressure?

Dr Mark Carney: It is entirely caused by that pass-through. Inflation has been picking up, and, when published at the start of next month, we expect the data for February to be at 2%. That is our point forecast: around 2%. But that pick-up has largely been because of the dissipating drag of past deflation—of largely import prices, past depreciation, low commodity prices and low food prices. That pick-up is a level effect, if you will.

We expect inflation to get to about 2.75% or 2.8% by this time next year. That overshoot and the overshoot at the end of the forecast—I mean the 2.4%, which in some respects is the most relevant—is entirely because of the pass-through of inflation. In other words, if we had not had the move because of the exchange rate—

Q53 Chris Philp: Is that the case even as late as 2020? That is three years away.

Dr Mark Carney: One of the lessons we learned, as an institution, from the depreciation of 2007/2008 is that exchange rate pass-through is quite protracted for sizable moves.

Now, we will see if the behaviour is not consistent with that—if it is sharper, more prolonged or more pronounced. But, most importantly, if we start to see second-round effects, in other words, if it starts to influence wage behaviour or other price behaviour and we start to see domestically generated consequences of that - that moves us closer to the limit. You have to look at it in the round.

Q54 Chris Philp: Governor, what is your definition of the limit in terms of above-target inflation?

Dr Mark Carney: I just gave you the conditions I would use. I believe different members will place different weights on those, but colleagues on the committee will use them to judge those limits.

I will make one point, if I may, on the path of interest rates in this forecast. We condition on the market path. We take an average of what the market is. We do not make a judgment on it; we just take that average and we put it in. The path of interest rates for this forecast, in February versus November, is a gentle increase in interest rates over the forecast horizon. It is about two interest rate increases over the forecast horizon. That is what the market was saying.

There was a shift, at least in the market's judgment, at the time we did this in terms of the path of policy. When we talk about the risk to policy—whether policy could be tightened relative to that or loosened—it is relative to a path of increasing interest rates.



HOUSE OF COMMONS

Q55 Chris Philp: Mr McCafferty mentioned that the market's medium-term inflation expectations are one of the considerations you look at. In chart A on page 31 of the Inflation Report, the green line expresses those five to 10-year forward inflation expectations, which have ticked up recently and are now at around 3%. If five to 10-year forward inflation expectations are now around about 3%, does that not suggest the market believes the uptick in inflation is not a temporary phenomenon caused by currency pass-through but has some more fundamental and longer lasting cause?

Dr Mark Carney: First off, thank you for drawing attention to that for a couple of reasons. One is that it gives a chance to remind everyone—I know you know this—that the market instrument uses RPI as opposed to CPI, and there is at least a one percentage point wedge between RPI and CPI. The market judges it is about 1%.

Q56 Chris Philp: You are saying the green line is RPI, not CPI.

Dr Mark Carney: It is.

Chris Philp: That is not clearly marked.

Dr Mark Carney: It is a market convention. It has always been the case, but, anyway, I am telling you now.

Chair: Is that right, Chris? Is it not marked in the Inflation Report?

Chris Philp: No, it is not marked at all. I am looking at page 31, chart A, which is titled "CPI inflation and summary measures of the levels of inflation expectations". In my view, that very clearly implies the green line is CPI. The note at the bottom makes no reference to RPI. At the very least, that chart needs to—

Dr Gertjan Vlieghe: This is not a market-based measure; this is a survey-based measure.

Q57 Chris Philp: Is that survey-based measure RPI or CPI?

Dr Gertjan Vlieghe: Some of the surveys specifically ask; some of the surveys do not ask.

Q58 Chris Philp: Is the green line CPI, RPI or some fudge of the two? This is quite important. Mr Haldane, you are the Chief Economist. Is the green line on chart A, on page 31, expectation of CPI, RPI or some undefined fudge of the two?

Andy Haldane: My recollection from this survey is that I am not sure the survey itself specifies the index for this one.

Chris Philp: That means there is an uncertainty of plus or minus 1% in the number.

Dr Gertjan Vlieghe: That is correct.



HOUSE OF COMMONS

Q59 Chair: This is quite an important point Chris is on here. Would you take this away and come back to us with an explanation of what we should read into this? First of all, what is the actual number? Then, what conclusions, if they are different from what is in the text, should we draw from the figure we are going to find out it is?

Dr Mark Carney: That is fine; I am happy to do that. But I will go back to the bigger point Mr Philp is raising. You can use the table on the adjoining page, which gives this information in much greater detail. There has been an uptick in inflation expectations, including on market-based inflation expectations, i.e. the five-year, five-year forward, which should be listed there. No, it is probably listed in the financial section.

Anyway, the point is that what happened during the period when we had zero inflation is that particularly medium-term inflation expectations in the market began to drift down. What we have seen, as inflation has returned, is they have returned to their historic averages. Mr Philp, the historic averages are consistent with 2% inflation. That has been the average inflation over the time these have been in place.

Equally, an important point is that since November there has been no uptick in market-based inflation.

Q60 Chris Philp: But you were saying historic expectations were 2%; they are now 3%.

Dr Mark Carney: Yes, if you look at—

Chair: Could you just say that a bit more slowly, Chris?

Q61 Chris Philp: The Governor said a moment ago that, historically, long-term inflation expectations had run at 2%, but they are now running at 3%.

Dr Mark Carney: No, I am saying that, if you look at table 1, historic averages are given from 2000 to 2007. If you look at the most recent market indicators and you compare that penultimate or last column to the first column, you can see they are consistent with historic averages, when you get to medium term. I can tell you, as well, that five-year, five-year forward, which is the most liquid indicator of market inflation compensation, is consistent with historic averages.

If you look on page 4, chart 1.7, you see something that is interesting. In a time of global reflation, you see quite a sharp uptake in inflation expectations the United States and in Germany—Germany is a proxy for the eurozone—as seen in the blue bits of those bar charts. You see very little movement, since November, in the UK. You have a situation in the UK where the judgment around inflation is that you have inflation increasing. We all know that. It is expected to overshoot. Most people know that; that message is getting across. Short-term inflation expectations should be coming up; they are beginning to come up.



HOUSE OF COMMONS

That is logical, because that is what is happening and what is expected to happen. But the market's judgment of medium-term inflation expectations has not shifted. It has not shifted, and that is consistent with what we expect to be a persistent but ultimately temporary overshoot of inflation from target.

Q62 Chris Philp: You have got it persisting until 2020, which is the end of your forecast period. How long do you expect it to persist for?

Dr Mark Carney: It has gone off stage. It is back by the fourth year, but we do not have a formal fourth-year of our horizon.

Chris Philp: It will drop off in 2021.

Dr Mark Carney: Yes.

Chris Philp: Yes, fine.

Chair: This will have to be your last question.

Q63 Chris Philp: Really? Okay. You mentioned in your last answer to John Mann that you started analysing different future courses of monetary policy, depending on how our economy performs as we leave the European Union. I sense you were straining at the leash to elaborate on that, so I would be interested to hear your views on that question.

Chair: Briefly, please, Governor.

Dr Mark Carney: Yes, a brief strain of the leash. The point I was trying to make is that one has forecasts and one has scenarios around the forecast, and it is important to think about the scenarios around the forecasts. There is a scenario around the forecast where the economy proceeds smoothly to a bold, ambitious trade deal. That is the core objective of the Government. In this scenario, that is well anticipated by households and increasingly anticipated by businesses, so uncertainty effects start to dissipate. That is a scenario that is consistent with faster growth relative to forecast, higher inflationary pressures relative to forecast and tighter monetary policy relative to forecast. That is obviously a good scenario that is raising interest rates for the right reason.

There are other scenarios that would be less optimistic or less positive, which could mean that policy would be on a different path from that. It could be on a looser path relative to what we have set out. It is important to recognise that there are scenarios where this process proceeds relatively smoothly to an increasingly clear endpoint, and that would be consistent with a higher path of interest rates. But that is one example.

Chair: I am glad that is the shorter reply. At this rate, we are going to be here for lunch.

Q64 Mr Jacob Rees-Mogg: Mr Haldane, I read your speech "The Dappled



World” and watched the interview you did with Bronwen Maddox, both of which were extraordinarily interesting insights into the world of economic forecasting. But I am interested to know how this then relates to the formulation of monetary policy, because when Mr Hammond asked whether there was anything that would have been done differently, had the forecasts been right, the answer was, “No, monetary policy would be the same”. Okay—there was a quick shake of heads to say nothing would change. What effects is economic forecasting having on monetary policy if, even if it had been right, the monetary policy decisions would have been the same?

Andy Haldane: I do come back to making sense of why it is the economy has performed better than we had expected immediately after the referendum, which of course is a thoroughly good thing. This goes back to the point that Jan very helpfully made about the difference between forecast errors and forecast mistakes. Some of what we have learnt about was generally unforecastable at the time. It has been a response to the policy actions that have been taken by us and others.

If you decompose our errors, there is a bit left, though, which is the behaviour of the consumer, in particular, and the housing market. That has been a genuine learning. That is an area where we can look to our frameworks for thinking, our surveys and our agency visits, for extra insight as to why that might be. We have been doing that. For example, earlier on we were discussing surveys of consumers and how there have been important structural shifts among consumers in how they might respond relative to the past.

In the housing market there are many more renters now than in the past, because the availability of mortgages is somewhat less. That may mean there is a cohort of younger savers who are looking to build up a target level of savings and may, therefore, respond somewhat differently to income and interest-rate shocks than in the past. That is the sort of thing where we can look into the granular detail and try to tell a more coherent story about why consumers might be behaving as they are behaving.

There are places where we can learn lessons—and indeed where we are learning lessons, I hope—with new models, but they will not get us away from the occasional making of errors, not all of which are mistakes.

Q65 **Mr Jacob Rees-Mogg:** That is very important. Of course, there will be errors, but there will be errors of model and errors of judgment. Is that fair?

Andy Haldane: Yes, absolutely.

Mr Jacob Rees-Mogg: You will judge some things to be worse than they are and some things to be better than they are. Some will be due to there being information in the models that is wrong and that you can put right—but that does not mean there will not be another error in the



model, because that is just the nature of things.

However, in terms of your learning from the errors prior to Brexit, in your speeches you are very open to learning from errors, but in the information we get from the MPC it becomes very minimal on any errors prior to Brexit and very maximal, if that is a word I am allowed, on subsequent actions. I just wonder whether there is not an element of self-justification in that, particularly when you look at the difference in importance the MPC is applying to the Chancellor's fiscal boost and that of the OBR, which the Chairman referred to.

Indeed, the Chancellor himself said it was fairly minimal effect. I wonder whether you will be able to understand what led to the Brexit errors if you basically brush most of them away by saying the changes have all come about because of the brilliant actions of policymakers afterwards.

Andy Haldane: To be clear, I do not think any of us on the table has quite said the last of your statements.

We have gone back and we have tried to make sense of why we made the misses we made. We are not attributing all of that to our brilliant policy actions—or, indeed, anyone else's—though, as best as we can tell from our very fragile models, a decent element of it was that. A decent element was also, as I mentioned earlier on, a somewhat stronger world, which also took us and, again, most of the forecasters somewhat by surprise.

That is not meant to come across as self-justificatory. I hope it has not done so. It certainly does not mean we have not learnt some lessons from both that and previous forecasting errors we have made. We have learnt some lessons, not least about the behaviour of the consumer. To Jan's point, our forecasts are a fusion of models and judgment. They always have been; they always will be.

When we make errors, it will typically be a combination of the two. We can refine our models, and we are. We can refine our judgments, and we have. But figuring out how much of that is a genuine mistake and how much of that is just things turning up is important.

Q66 **Mr Jacob Rees-Mogg:** In your speech "The Dappled World", you concentrate more on the 2008 experience, where the error was very large. You consider the difficulties of everybody thinking the same thing, because it was by no means only the Bank of England. Other than Peter Warburton, who had been paying attention to debt, very few economists were focused on what was going on. In that, did the bigger error come because economists followed the same models or followed the same judgment?

Andy Haldane: It would be difficult to differentiate the two very much. The intellectual framework for thinking was quite common—and perhaps even quite groupthinky at the time. One way that manifests itself is in the models people use to help with their storytelling. It was a



combination of the intellectual framework within which people were operating and the models they used to justify that intellectual framework. It was a combination of both.

Can I just come back to one point on our August actions, if I may? It links to the point Mr Philp just made about inflation expectations. For me, one of the virtuous things about our August actions was that they did boost somewhat measures of longer term inflation expectations. In the run-up to the referendum, if anything, certainly personally, I was a little bit worried they were getting a little too low. Of course, there were worries in financial markets and more widely about, if not deflation, lowflation.

What we saw after our August policy package was those longer term inflation expectations picking back up, having been, if anything, a little bit too low, back towards target. To the Governor's point, they then stuck there. I would say, in terms of diagnostics on those actions having been, for me, the right ones, that is quite a useful diagnostic of having, if you like, cut off that lower tail of sub-optimally low inflation expectations.

Of course, if expectations keep on picking up from here, that would be a cause for concern for all of us. But thus far, at least, we have seen that correction take place and expectations stick. That was the result not of global developments. It preceded the pick-up in inflation expectations in the US and the euro area. As best we can tell, that was a direct response to some of the actions we took.

Q67 Mr Jacob Rees-Mogg: I do want to come on to that in a moment, but I just want one final thought on 2008 and Brexit. To what extent do you feel economists—and particularly the Bank, with its very authoritative position—ought to be more cautious in the authority they give to their forecasts?

2008 was off by 8%, and Brexit was off by less but was politically extremely important because of the standing of the Bank. Is there anything you can do essentially to caveat forecasts so there is greater understanding of what you have been saying in "The Dappled World" speech and in the Bronwen Maddox interview? It seems to me that one of the risks for policymakers is feeling that these forecasts are holy writ and then being told six months later, "We never meant that in the first place". There is a need to express that in the first place, rather than six months later.

Andy Haldane: It is a really good challenge. Of course, as you know, we already publish fan charts around our forecast and have done for long standing, back to the previous Governor, Lord King, emphasising the degree of uncertainty we have.

To give an example, the outcomes for GDP we have seen since the referendum—although, in a sense, we missed—are well within the bounds of our fan chart. There was about a one in four chance of the outcomes



HOUSE OF COMMONS

we have seen coming to pass. It is true that, to a wider world, conveying that sense of uncertainty is not straightforward. We know that people find risk hard to understand. I find risk hard to understand.

Chair: People do not look at fan charts.

Andy Haldane: They tend not to, no.

Chair: In our constituencies, when we go back at the weekend, we do not find them gripping fan charts.

Helen Goodman: My constituents speak of little else.

Andy Haldane: But, to your point, should we think imaginatively about ways of conveying a greater sense of that? Yes. To go back to the topic of meteorology, of course, it has made great efforts to think of ways of conveying the probabilistic sense of what might happen in a way that is accessible to as wide an audience as possible. That is not always successful, but there could be some lessons we take away and think hard about on that front.

Q68 **Mr Jacob Rees-Mogg:** In weather forecasting, if you just say the weather tomorrow will be the same as it is today, you have a two-thirds chance of being right—and I wonder whether economics is as simple. Governor, you wanted to speak up.

Dr Mark Carney: It has been a very interesting exchange. I have a couple of quick points. You rightly asked about the effect on monetary policy if we had had a different forecast. There are a couple of ways in which monetary policy is affected by the different outturns.

The first is that, in the forecast in August, we said, "If this forecast is accurate, or the economy is broadly in line with the forecast, a majority of the committee would favour additional monetary stimulus". The reason we did not provide it at the time was due to the uncertainty and the scale of the adjustment, and then that lapsed in November. That is one way the path of policy was different.

The second is the expectations of markets. This is a market expectation in terms of the path of policy, as well, so it is obviously affected by what we do and say. Also, there is now an expectation in markets of some tightening of policy over the next few years. When we talk about the risks around it, they are the risks around there. Policy is affected by the outturns; it is just that, at present, the judgment of the MPC, unanimously, is that the policy stance remains valid today.

I will make a second point to that. At some point, that will no longer be the case. That does not mean the policy stance was wrong at the time. That is an important point, and we will not live in any fear of that accusation—and we would not hesitate to change policy if we felt it was appropriate to change it.



HOUSE OF COMMONS

Chair: Jacob, you will have to cut in.

Dr Mark Carney: I will make two final points, if I may.

Chair: Be very quick—very quick.

Dr Mark Carney: I will be very quick. The first is that the issue about model versus judgment is a bigger discussion. One of the judgments where there was a collective lapse was on “lean” versus “clean” in terms of financial stability problems, i.e. that it is easier to clean up after a mess than to lean against it. It is a bad judgment. It is now incorporated into our remit for monetary policy that we can tolerate inflation, for financial stability reasons, under target for a longer period of time—if we judge it appropriate, in consultation with the FPC. To the credit of this system, that is one learning that has been incorporated.

The last thing is this. You will not like me for saying this, but success is an orphan, in terms of the financial stability risks around the referendum. The Bank did take some serious steps in order to mitigate the risks. If we had not done that, there would have been macroeconomic consequences. It is important that we did it. We just have to accept that we are never going to get any credit for it.

Chair: You have made that case quite thoroughly over the year.

Dr Mark Carney: Yes, but I am glad we did—or we would be having a very different conversation.

Chair: Jacob has one more quick point, and can we have a quick reply?

Q69 **Mr Jacob Rees-Mogg:** Mr McCafferty, following what Mr Haldane was saying about the increase in inflation expectation, when would you hope interest rates might get back to a more normal level?

Ian McCafferty: At the risk of giving a longer answer than the Chair will thank me for, it is going to depend hugely on what you mean by a more normal level. It is clear that interest rates are going to remain lower than the sorts of rates one got used to before the crisis for some considerable period—and long after my time on this committee.

Whether we can start to see a gradual normalisation of policy is going to depend very much on quite how the economy responds to the negotiations with the rest of the European Union about Brexit over the course of the next few years—and, as the Governor has given at some length, the reactions we are likely to see from both consumers and businesses to that.

As has already been said, the current forecast is predicated on two small increases in interest rates over the course of the forecast horizon. Our discussions on whether we are slightly faster or slower than that depend on the evolution of the economy, but there is some hope that we can



HOUSE OF COMMONS

start to see the beginning of a gradual normalisation, if you like, over the forecast period.

- Q70 **Chair:** Mr Haldane, you said earlier, some time ago in the evidence session, that the Bank had not fundamentally changed their view about the long-run impact of Brexit. How do you reconcile that with the fact that there has been a fundamental change of information or an improvement in information about the direction of Government policy with respect to Brexit? We now know the Government is going to abandon any attempt to remain in the single market and that it will leave the customs union.

Andy Haldane: Earlier on, I mentioned that at the time we looked at a range of possible trading arrangements and took the average of those in the absence of any better judgment at the time. It is true the debate on this has moved on and is moving around. Perhaps we could have done a rather more subtle re-averaging of the possible range of outcomes.

- Q71 **Chair:** You would not describe leaving the single market and the customs union as something requiring a bit of subtle re-averaging, would you?

Andy Haldane: The reason we did not make any shifts in that set of assumptions is because, when we played through the impact that would have on our forecasts, the impact was relatively modest—not least because these outcomes are some point into the future. Therefore, telescoping that back to today, the impacts on our forecast over our policy horizon up to the three-year point were relatively modest.

We will keep them under review. As the debate moves, at some point in the future we will perhaps change those. But for now it will suffice to say that, even if we had adjusted them, it would not have had a material bearing on our inflation and output projections—and therefore on our policy presumptions.

- Q72 **Chair:** Yes, but this should be a two-stage process. First of all, you work out what assumptions you should feed in and then you take a look at the outcome. You should not say, "If I change this assumption, the outcome will not be very different—so why bother?" That does not seem to be the right way to approach working out your assumptions.

Andy Haldane: My point was only that we had looked at this question and asked whether we wanted to alter our assumptions and what impact that might have on our projections.

- Q73 **Chair:** But people out there will find it striking and bizarre that something as fundamental as those two issues has resulted in no change in your assumptions. I would just like the Chief Economist to comment, because he is the lead man on this issue.

Andy Haldane: Those are, indeed, fundamental judgments for the country. My only point is that, in terms of the near-term impact that would have on our inflation and output projections and, therefore, on our



HOUSE OF COMMONS

monetary-policy judgment, they were not felt to be first-order, over that policy horizon, for us.

Q74 George Kerevan: Mr Haldane, the collective view has reduced the equilibrium rate of unemployment by 10%. Your forecast for the period has unemployment, therefore, above the new equilibrium rate by 10%. Will that impact on inflationary expectations and wage growth?

Andy Haldane: Yes. As you say, we have lowered our estimate of equilibrium unemployment from a little above 5% to around 4.5%. Other things being equal, that means there is more slack, if you like, in the labour market than we had previously thought. In turn, that will make for a somewhat weaker wage profile than we had had previously. If you look in our most recent Inflation Report, you will see that wage growth is consistently lower in this term's forecast relative to the previous one.

Q75 George Kerevan: What I did not quite understand in the report was how you were linking productivity to equilibrium wages. It seemed to suggest in some places that low productivity was leading to downward pressure on wage growth. Could you explain that?

Andy Haldane: Yes. On average, looking across decent spans of history, you do find—as you would expect to find—a strong relationship between the underlying productive potential of a company or a country and how much it can afford to pay its workers. That is very much there in the data.

The fact that productivity growth in the UK has, we think, been rather weak over the period since the crisis has been an important factor holding down wage growth. In fact, some of my colleagues would even say it has been the main factor suppressing wage growth over the period.

Truth be told, if you look at the evidence on wage growth, it has been weaker, even, than we can explain from the weakness of productivity. A couple of years ago, we told a story about the low level of actual inflation being a further factor holding down wage growth. The judgment we reached in February was that, even taking account of the weakness in productivity and even taking into account the weakness of inflation, there was still an unexplained degree of weakness in wages of long standing.

That was one of the key factors that led us to re-look at our judgment around this equilibrium unemployment rate and to lower it to 4.5%. For the avoidance of doubt, personally, I think the risks around that judgment are genuinely two-sided. It strikes me that it is as likely that equilibrium unemployment could be 4% as that it may be 5%.

There are important structural changes afoot in the labour market—we have mentioned a few today—that might mean the equilibrium unemployment rate is somewhat lower than it has been in the past and closer to the rates we saw in the 1970s rather than the 1980s or the 1990s.



Q76 George Kerevan: What is the missing ingredient? Could you speculate? What is the missing element? You have said that you cannot explain all of the undershoot in wage growth from simply productivity issues. I noticed one thing you did not seem to discuss anywhere in the report was, perhaps, the impact of the external economy and pressures on UK wages from external competition. There could be something there that might have a domestic impact.

Andy Haldane: To be clear, with the judgment we have made in the February report around equilibrium unemployment, we can now account for the vast majority of that undershoot of wage growth we have seen over recent years. In some ways, the judgment we have made helped reconcile this long-standing wage puzzle that we have had. To be clear, this is of long standing. I gave a speech on this, about the possibility of lower U^* , almost two years ago—in March 2015. Jan has given speeches on that and Mark has given speeches on that. My colleague Michael Saunders has given speeches on that. It has been there in the ether for quite a number of years. This is not a snap judgment we have suddenly made.

In terms of the forces shaping that, there are a number of possibilities and you have mentioned some. In the report we mention a couple based upon our own internal research, which includes the fact that we now have a somewhat older workforce than we have had in the past and their sets of skills are somewhat greater. The fact that people are staying in the jobs market for somewhat longer, with somewhat richer skills that are somewhat easier to match into work, is a factor that may mean the equilibrium unemployment rate is somewhat lower than it has been in the past. That is one out of a potentially rich range of explanations.

Q77 George Kerevan: Can I move on to ask the Governor a question? Taking that as read, from reading through the report it seemed to me that there is an underlying assumption in your collective thinking that inflationary expectations jump back to some historic norm. For an economist of my ancient lineage who lived through the 1970s and 1980s, inflationary expectations can do some quite extraordinary things. They do not, from my perspective, revert to some historic mean. If we have a situation where we have a labour market where new structural factors are holding down productivity growth, and we then enter into an uncertain period where imported inflation starts to impact on consumer prices, that would seem to me to at least in theory open up the prospect of a significant jump in inflationary expectations. This would lead to an impact on the labour market—those parts of the labour market that have some strength pushing up wages.

I will just test your thinking on this. It seems to me that the report is just a little bit too sanguine over the forecast period of inflationary expectations reverting to a short-term historical norm of the last decade that has been quite low. The new global situation of the UK is that it is having to face increased competition globally, and this is adding to the pressure on wages. You might get a labour response that says, "Wages



HOUSE OF COMMONS

are being held down. We do not like this; we are going to respond by some labour action". This is just to test you, but how strong are the pressures that would lead to inflationary expectations, particularly for households and consumers, reverting to some low historic mean?

Dr Mark Carney: There is a lot in that question. The first thing to say is that it is a little more than a decade that there has been this historic mean broadly consistent with a 2% target. It has basically been like that since central bank independence, and you can even stretch it back a little earlier to the advent of inflation targeting. Certainly since 1997, this has been the case. It is a longer period of time, but we are not taking that for granted by any means. It is one of the reasons why we have highlighted that inflation expectations is one of the key things that we are watching. You would expect us to do that when we go through a period of above-target inflation and we are explicitly intending to tolerate an overshoot for a period of time.

Now, one of the things we really are looking at will be, "Are there any second round effects?" This goes directly to, "Are there labour market effects?" Are people demanding higher wages because they are seeing higher prices in the shops? It is entirely understandable and, regarding a more successful strategy - you called it labour market action - I am not quite sure what you are contemplating in terms of the structure of the UK labour market and its relative flexibility, which is one of the many reasons why we think that the equilibrium unemployment rate has fallen, but is the wage bargaining going to result in upward pressure on wages? It matters how much slack is in the market. This judgment that we have been discussing today is incredibly important.

Again, that is the second key judgment we are making. We have been very explicit and upfront in the report and in our monetary policy statement about these inflation expectations and whether the behaviour of wages is consistent with the judgment Mr Haldane has been talking about in the labour market. If not, this will have consequences for the path of policy.

In terms of where pay growth has been, average regular pay in the economy, which is one of the many indicators of compensation, is probably the most reliable in terms of mapping through to unit labour costs and therefore to inflation. The most recent figures show a slight downtick in the rate of growth. I would not put too much weight on it, but we do not see the pressure there. Our agent survey of wage settlements for 2017, which has some decent predictive power, actually shows a deceleration of wage growth from 2.7 to 2.2 for 2017. I think one can only explain that by some degree of uncertainty and the balance of bargaining power shifting a bit more towards employers than workers, in this environment of uncertainty. However, we will see. If we do see any of the elements that you are describing, and to different degrees, at different times to different members of the committee, it would have consequences for the path of policy.



Q78 George Kerevan: In addition to the impact of the devalued pound, Mr McCafferty, in particular, you are saying in the report that out there in the ether is the prospect of a rise in Bank Rate over the next three years. In fact you say, "Conditioned on a market path for Bank Rate that rises to just under 0.75% by early 2020, the MPC projects CPI inflation to fall back gradually". I read that as, unless you are raising Bank Rate to at least 0.7, inflation will not fall back. Into the inflationary mix we have to add interest rate rises. How do you think that will impact on expectations, Mr McCafferty?

Ian McCafferty: In terms of what that does directly to the CPI, it does very little, because at present the CPI does not include mortgage costs. As a result, any changes in mortgage rates do not feed directly into CPI in the same way as they used to under RPI.

George Kerevan: That is why I prefer RPI.

Ian McCafferty: I would argue that there are other problems with RPI, which may preclude it from being a good target as well. I would say that I worked through the 1970s and 1980s, as you did, as an economist, so I am always mindful of the possibility of a de-anchoring of inflation expectations. The Governor is right when he says that the long-term averages apply since the change in the monetary policy regimes and the advent of explicit inflation targeting. Inflation expectations have been rather calmer and more stable than was the case prior to that period, and we can therefore expect that to continue. But it is an upside risk to our forecast that if the natural rate of unemployment is perhaps not as low as we have changed it to be, or if consumer attitudes or employee attitudes towards nominal wage bargaining were to shift relative to where they have been for the past three, four, five or six years. There would then be more domestically generated inflation and that would have consequences to policy. It is an upside risk and is one we will continue to monitor closely.

Chair: George has one more quick question. I hope it is a quick question.

George Kerevan: It may not be. If it proves not to be, then I will forgo it.

Chair: You are too late then.

George Kerevan: I am a team player. I will let Helen in.

Chair: That is very kind of you, George. Thank you very much.

Q79 Helen Goodman: We are all interested in the labour market, because you have said in the Inflation Report that your key judgments and risks are weak real-income growth weighing on UK domestic demand and slack in the labour market weighing on wage growth. We have all homed in on this. There is one thing I am not quite clear about and I am going to ask this question of Mr McCafferty. It is highly likely that we will have less



immigration in the next few years. We are already seeing that, partly because of the exchange rate but for other reasons as well. That is before we have any policy changes. When you were looking at having this discussion about the fall in the equilibrium rate of unemployment, it looks as if you have taken account of the expansion in the labour supply from free movement but not the potential reduction, which is the scenario over the next few years. Is that a fair criticism or question?

Ian McCafferty: It is a good question, but I am not sure it is quite a fair criticism, in the sense that, as with a number of other of our assumptions within the forecast, we predicate the forecast in terms of migration flows on those provided by the Office for National Statistics. They are expecting a slowdown in the net increase in the labour force and the population as a result of immigration over coming years, and that is built into the forecast already.

There are of course risks around that. They are expecting the net flow to fall, on an annual basis, from 300,000 to around 150,000 over that period. There are clearly going to be risks to both sides of that ONS forecast. The early data over the last few months suggests that maybe immigration flows will fall rather faster than that; it may well be that the continued strength of the UK economy relative to that of certain other European economies will continue to be a magnet for immigration, in spite of the renegotiation of our border controls. From that point of view, there are risks to both sides of that assumption, but we do have a reduction in immigration built into the forecast.

Q80 Helen Goodman: That is a very helpful answer, because I was rather surprised that that issue was not mentioned. You have a very interesting chart, chart D, on page 19, showing that wage growth has been weak relative to the unemployment rate. You are showing a downward shift in the Phillips curve. If we see a reduction in the labour supply as forecast by the ONS, does that mean a shift in the Phillips curve, or are we simply moving along it?

Ian McCafferty: It could mean either or even both; that is the short answer. It depends on whether this is a structural change or otherwise. One of the key questions is whether the shift in the Phillips curve that we have seen since the crisis is going to remain a permanent structural alteration to the economy. There are a number of reasons to suspect that it might well be, not least changes in government benefits relative to the benefits of being employed, for example. That is one of the reasons why we think that the equilibrium level of unemployment perhaps has fallen somewhat, even if we disagree slightly on the exact degree of that level.

There are still questions as to both the slope and the positioning of the Phillips curve, and whether the degree of slack and some of the shorter term impacts of the crisis over the last five to seven years are going to remain persistent or not.



Q81 Helen Goodman: There is a very interesting section on inflation and nominal wages also in this box. In this, you point at the fact that, from the point of view of the employee, what they are facing is higher inflation, we have seen a fall in the labour supply and we have had this confidence effect—people were expecting that one of the benefits of Brexit was that they were going to be better off. On the other side you have pointed at the squeeze on margins for employers. One thing one might say is that it is very difficult to see how those things will play out and whether that means that wage growth will be higher or lower, but does that not also suggest something else, which is that there will be more conflict in the labour market?

Ian McCafferty: That is a distinct possibility, and how that is then resolved, in terms of the balance of bargaining power that the Governor referred to between employers and employees, is one of the big uncertainties that we face. Given that 60% or 70% of wage settlements are negotiated in the first five months of each year—the pay round, if you like, to the extent that it still exists—we will learn quite a lot about the balance of power between the two sides of the labour force over the course of the coming months.

I think that you are right; essentially, we have to accept that the sharp depreciation in sterling is a fall in the purchasing power of the UK economy. Quite how that is distributed between employees and employers, through margins, and how that then feeds through into the broader macro-economy and hence into policy remains to be seen. There will be some difficulties, particularly at the margin and in certain areas where skill shortages currently exist, where we may well see slightly more animated bargaining than perhaps we have seen in the past.

Q82 Helen Goodman: Mr Haldane, I want to ask you some questions about your speech in Redcar, but do you wish to comment on this before I come on to your Redcar speech?

Andy Haldane: I thought Ian set out the issues exceptionally clearly. We had one of our regular surveys in the field of our agents on just this question and the factors we mentioned here, weighing on wage-bargaining, both upwards and downwards, were mirrored in what we found from our survey. As the Governor mentioned, the net effect of them from our agent survey was, if anything, that the pressures were in a downward direction, rather than up, but time will tell, because we are in that crucial phase of the wage-bargaining cycle, as Ian mentioned.

Q83 Helen Goodman: I want to ask you a couple of questions about QE. In 2012, the Bank of England published an analysis that showed that the wealthiest 5% of the population had benefited to the tune of £185,000 from the QE that had been undertaken at that point. This did not get very much attention until the Prime Minister stood on the steps of Downing Street in July and started raising these issues.

Since then we have had quite a lot of what some people might see as



defensive remarks from the Bank, probably culminating in your speech in Redcar. You drew attention to a number of regional inequality maps, Mr Haldane, which were quite interesting. I just want to ask you a couple of things about it. What I would like to suggest to you is that a very clear and tight distinction between inequalities of income and inequalities of wealth is perhaps not terribly helpful, because what we have seen between 2002 and 2014 is the ratio of house prices to median salaries rising from 6.4 to 8.8, and we have also seen, over that time period, the amount of people's spend on housing costs rise from 17% to 21% or 22%—something like that—which is quite a significant increase; it is a 4% or 5% increase. Are you not a little bit concerned that the Bank has fed the housing bubble?

Andy Haldane: What I tried to do in the speech that you kindly mentioned—the Redcar one, but also in the one I gave before that in Port Talbot—was to try to set out as clearly as I could, with the data that we have, some of the distributional questions. I hope that, if nothing else, was a demonstration of the seriousness with which I was taking not just the aggregate impact on the economy but how that has fallen, whether it is on a regional basis, whether it is looking at different income cohorts, whether it is looking across the age distribution, and finally, to the last of your points, how that falls as between homeowners and renters. It is a different picture, depending upon how you cut the cake. As best we can tell, just studying the aggregate level, the actions we have taken, both with interest rates and with quantitative easing, have benefited every region in the UK—and materially so. We have seen unemployment fall—

Q84 **Helen Goodman:** I am not challenging that; I do not doubt that. I am not saying that you should not have cut interest rates in the summer. My question is more precise—and I am not one of those people, like my colleague Steve Baker, who is opposed to QE altogether; I have a seat in the north of England. My question is more specifically about whether the way you do the QE has particularly badly impacted on the housing market, and the possibility of doing it in different ways to lessen that impact.

Andy Haldane: On the housing market dimension of that, it is certainly true that the actions that we undertook, both with rates and with QE, had the effect of stimulating asset prices; that was one of the channels through which they were intended to work. Referring back to the *Quarterly Bulletin* article that you mention, does the impact of that fall equally across society? No, it depends a bit upon your initial stock of wealth—

Helen Goodman: Entirely on that.

Andy Haldane: It is one of the factors, and housing wealth is a large proportion of total wealth. When you look at how the distribution of wealth gains has been distributed across the UK economy, as I did in those speeches, you do find there is a big skew towards older



HOUSE OF COMMONS

households, who tend to be homeowners, and the upper end of the income distribution.

I would, though, differentiate between that and the Bank's actions—or monetary policy actions generally—having been the key driver behind developments in the housing market. For me, the reason we have seen, not just over recent years but over the course of several decades, a rise in the price of houses relative to people's incomes has been unrelated, in the main, to monetary policy; it is fundamentally rooted in a supply-side problem. We can do a little to moderate or to boost the demand in the economy, including the demand for housing, but ultimately we cannot influence the supply of housing out there. It is the shortage of that that has caused that secular rise in house prices.

Q85 Helen Goodman: Of course; I understand that, Mr Haldane. When I raised the issue of the £185,000, which was the figure in 2012, those are not my numbers, the Government's numbers or ONS numbers; those are your numbers. This is your analysis showing that the work that you have done has had this impact on house prices, so do you not think that that is a significant amount?

Andy Haldane: It plainly is a significant amount.

Helen Goodman: It is more than enough to buy a house in my constituency.

Andy Haldane: Right. Has a significant boost to asset prices, and within that to house prices, been generated by our actions? Yes, it has. Have the effects of that been felt equally across the economy, across regions and across households? No, they have not. Does that mean, though, that people have been at all disadvantaged in absolute terms by our actions? There the evidence is very strongly to the contrary.

Q86 Helen Goodman: You presented your charts 13A and 13B about the growth in median net wealth with and without monetary policy stimulus. Would it be possible for you to do maps that showed the effects of the interest rate and the QE separately on the median net wealth?

Andy Haldane: I will take that away; I do not want to over-promise. I also want to make the point that these are, of course, all estimates based on the fragile models that we were discussing earlier on. I will take that away and reflect on whether we could do some decomposition as between the effects of rates and QE.

Helen Goodman: It does raise the question—and I think this was the point that George wanted to make—about what it is that the Bank purchases in its QE programme, and the fact that, for example, the ECB spends more on investing in infrastructure bonds and in SMEs than the Bank does specifically, and whether, were the Bank to do the QE in a different way, it might have all of the excellent benefits that it has without these downsides in the housing market.



Chair: George, did you want to come back on that?

Q87 **George Kerevan:** My question did follow on from that. In the situation where we have asset purchasing and we have moved on to purchasing corporate bonds, does that become the default purchase from now on because there is nothing else to buy?

Dr Mark Carney: What the committee said when we eased in August is that, if we needed to ease again, we could use any of the instruments that we used in August, which by definition means corporate bonds, gilts or the Bank Rate.

Q88 **Rachel Reeves:** I just wanted to follow up on something that the Chairman said about the work of the Bank of England agents before moving on to the topic of household consumption and savings. The Chairman asked about the work of the agents and whether you would go away and come back to us with some more information about how those agents' work is used and the resources put into it. I just wanted to give a couple of suggestions of things that I thought that the agents could look more at. Certainly when I was at the Bank I found the work of the agents incredibly helpful, and when I moved to work in the private sector away from London, I spoke regularly to the Bank agents in Yorkshire.

There are two parts of the economy, though, that I am not sure the agents, or indeed the Bank, look at sufficiently. The first is the self-employed, which is clearly a growing part of the economy. I think by the early 2020s there are likely to be as many people self-employed as working in the public sector, so how are the Bank agents, and indeed the Bank of England as a whole, understanding that part of the economy, the wages paid, the investment decisions etc.?

Following on from something that Mr Haldane spoke about in his speech at Port Talbot, you mentioned in that speech, Mr Haldane, about going to a community centre in Nottingham and hearing a very different perspective on what type of recovery it was and whether the benefits were being felt. I wondered, as well talking to the CFOs and the chief executives of business, whether the agents could talk to people in the voluntary sector and community sector, to have a better understanding of what type of recovery it is. In the response you give to the Chairman, I would also be very interested to better understand what resources are being allocated and the way in which the Bank uses the information from the agents.

Dr Mark Carney: I will take both of those back, but particularly on the voluntary and third sector, we have substantially broadened our outreach to those sectors. For example, all of my agency visits, and I think Andy's as well, include in the same roundtable members from those sectors, as with the CFOs and CEOs of companies, so we get a broader perspective. Our recent Future Forum in the Midlands had a series of specific tables with those sectors, exactly to answer these questions, and it goes to not just understanding how the economy is being affected on the ground but to the earlier questions about behavioural responses to policies.



Q89 Rachel Reeves: The issue that I want to raise is that around consumption and savings. In the minutes of the MPC meeting in February, you point to the household debt-to-income ratio being 134%, but you go on to say that this is 16 percentage points lower than its peak in 2008. You then say that since that peak nominal household credit growth has averaged only 2% per year, and that even over the past year it had been only marginally faster than growth in household income at 4%. It sounds like you are pretty relaxed about household debt. If you just take those raw numbers, I guess I can understand why, but are you so sure that the household debt increases and the income increases have been for the same people, or has it been that the income for one group of people has gone up and the debt has gone up for a different group of people whose income has not gone up?

My question is whether we should have some distributive concerns and some sustainability concerns. If the people whose debt has gone up have not experienced an increase in income, is this sustainable and should we be concerned about it?

Dr Mark Carney: Ms Reeves, this is a very important question. The first thing is, as you know, within that overall growth of household debt there has been a much sharper acceleration of consumer debt, so unsecured debt. That growth, which is now 10.6%, has broadened; it originally started with autos and PCP lease-type contracts but has broadened into credit cards and overdrafts, so we as an institution across the various committees are watching that closely.

Can I just say a couple of things about it? First, we have to put this in some context, which is that consumer credit is about 13% of overall debt. Secondly, the increase in consumer debt relative to the increase in consumption is funding at most about 10% of the increase in consumption, so it is something but it is not everything, by any stretch of the imagination.

In any of these situations, whenever we see some credit aggregate start to pick up to that extent, we should look at it. The responsibility starts with the individual, of course; they are the one who is drawing down the debt. It extends then to the bank or whoever lends them the debt. Thirdly, it goes to us as policymakers, to think about whether things are being handled appropriately. Just to give you a bit of a sense of the sequencing between the committees, about 70% of this personal debt—it is actually 80% when a merger goes through—is provided by PRA-regulated firms, so the PRA looks at the underwriting standards. Any time you see things moving, you want to make sure that those standards are not going from responsible to reckless.

From an FPC perspective, we look at the overall amounts and, particularly to your point, at whether there is this mismatch, and whether we are growing a bigger cohort of people who are really going to be squeezed if the economy turns down or if interest rates move up, and that is going to have outsized macroeconomic effects.



HOUSE OF COMMONS

Obviously from an MPC perspective, we want to be comfortable about tail risks and we also want to understand what this tells us about consumer behaviour, consumer momentum, inflationary pressures and therefore the stance of monetary policy, so the issue does cut across all the committees. It is something we are looking at closely. I do want to put it in some context though, but I am sure it is a discussion that we will continue to have.

Q90 Rachel Reeves: Have you done the work that looks at who has taken on the debt? If so, what does it show? Is my hunch correct: that the people who have seen an increase in the debt are not the same people who have seen an increase in their incomes?

Dr Mark Carney: It is not as clean as that. We do work on that; we use, again, this NMG survey as a first cut for it. One of the advantages of the new structure is that on a micro level we can do that work as supervisors, to go down and see where the underwriting standards are, so who is borrowing, what their income is, what the assets behind are, and whether those are consistent. It will not surprise you that we are looking at that much more closely now with the PRA.

Q91 Rachel Reeves: What is what you have looked at so far telling you?

Dr Mark Carney: I do not want to overplay it at this stage, because we are looking at it, but we are concerned enough to look more closely at the easing of credit standards. I will give you an example: the ability to transfer a credit card balance has extended out to 40 months of interest-free. That is quite a marked ease. There is an accounting benefit for the firms that comes along with it, in that they can realise some income over that period in which the individual is not paying any interest. That is the type of situation that causes some concern. We are concerned enough to take a harder look at it, but I am not in a position to give you a conclusive view on those standards at this stage.

Rachel Reeves: It would be interesting to see, perhaps in a future Inflation Report.

Dr Mark Carney: In the coming months we will, yes.

Q92 Rachel Reeves: You have already touched on this a little bit, Governor, but are you concerned about lending criteria at all? What I am seeing as a constituency MP is that lending criteria seem to me to be being relaxed, with lending being pushed on customers more than it was perhaps a year or two ago. Are you seeing that at all?

A related question, which is again distributive, is one on which I do not really have a view but am interested in yours: have some groups seen the feed-through of your very relaxed monetary policy? Have some groups seen that feed-through more than others? Have some groups—those with mortgages—seen sharp declines in their borrowing rates, while other groups, perhaps the less well-off and those with unsecured lending, have seen less of that pass through? I know you are saying about the



zero balances on credit cards, but there are other forms of unsecured lending.

Dr Mark Carney: I believe we had an exchange in the last session about the MPC, and I wrote in on some of the pass-through; it might have been two sessions ago. We are now seeing, in terms of mortgages, that the full 25 basis points—in fact a little more—has been passed through on SVRs, including on fixed rate mortgages because longer term yields have come down. It is being passed through, and those who have mortgages, which is the bulk of debt, are seeing the pass-through of the benefit across the income group.

The second point is about some apparent loosening of credit standards. I gave you one example, but we have seen some other examples of that, so we are looking at that. Part and parcel of that, with the lower interest rates, is that we are seeing lower interest rates on unsecured borrowing. I think we gave the example in the report of rates on £10,000 loans, which interestingly have come down more sharply than those on £5,000 loans, because the latter tend to be debt-consolidation-type loans as opposed to specific opportunities for individuals. We have seen that and we are looking at it.

In terms of broader criteria, though, in the mortgage market, which after all is more than 85% of borrowing, we have in place this portfolio limit of 15% on high loan to value. We have in place a stressed interest rate that mortgagors have to use and the new MMR standards that are in place from the FCA. Those standards have held up. People are not bumping up against that 15%. We have refreshed and reviewed; the FPC just did a review, with the FCA, on this. Those standards are holding up, so in the core of the lending market—85%—standards are still pretty robust. As you rightly raised, on unsecured households we are looking at it, as we should.

Q93 **Rachel Reeves:** Just to summarise, you are concerned about lending criteria outside of mortgage lending, but you think that rate reductions have been passed on across the board.

Dr Mark Carney: We think rate reductions have been passed on, and I would add that importantly rate reductions have been passed on to businesses; there is £450 billion business borrowing out there, it's largely floating rate, and we have seen full pass-through of that to businesses.

Q94 **Rachel Reeves:** Finally, can I just ask about your forecast for consumption? The Bank's forecast sees the household savings ratio declining to a record low, and with inflation eroding real income, the only way to sustain the consumption forecast is through that further decline in the household saving ratio. How realistic is that? How sustainable do you think it is that households continue to reduce their savings to fund consumption?

Dr Mark Carney: The first thing is that that shows there are some two-sided risks to our forecast. We do have a slowing in household



HOUSE OF COMMONS

consumption over the forecast horizon, as you know, and it is fair to describe it as a marked slowing. But in order even to have that rate of consumption, given where we think wages are going to go, the savings rate has to fall to historic lows. The one thing I would say about measures of the savings rate is that it is only direction that matters; it is never the absolute level. The one thing we know about the savings rate is that it will be substantially revised after the fact. It is the ratio of two very large numbers with substantial uncertainties around them.

Why would households be willing to further reduce savings? It would be because they are confident that the squeeze on their incomes is temporary, that there is a temporary increase in inflation, that the economic outlook remains positive, including through this period of somewhat uncertainty, and that confidence allows them to look through it and support the economy. However, it does show, with the savings rate coming down, that there are some downside risks to this forecast as well as upside risks. We have spent a fair bit of time, rightly, on the upside risks, but there are some downsides, and this is one of the biggest.

Q95 Rachel Reeves: Each of you very quickly, on household consumption do you think that the risks are more to the upside or to the downside of central path in your forecast? You can just say “upside” or “downside”.

Dr Gertjan Vlieghe: There are risks to both sides.

Q96 Rachel Reeves: Which one is greater?

Dr Gertjan Vlieghe: The only thing I would point out on consumption is that all the indicators, until quite recently—about six weeks ago—were consistently surprising in the direction of being stronger than we thought. In the last four to six weeks, it has become decidedly more mixed, so if there is—

Q97 Chair: Are you on the upside or the downside?

Dr Gertjan Vlieghe: Relative to our forecast, the risks are in either direction.

Rachel Reeves: Mr Haldane?

Andy Haldane: Downside.

Rachel Reeves: Dr Carney?

Dr Mark Carney: It is so recent it is balanced.

Ian McCafferty: Me too; they are roughly balanced

Q98 Kit Malthouse: Governor, last time we met to talk about this in November, it is fair to say you bridled a little at my suggestion that there might be issues with the information-gathering and decision-making, so I am pleased that much of the conversation today has obviously been about that, but you also said early on that you wanted to move on to talk



HOUSE OF COMMONS

about possible scenarios for the economy. I have to confess to you that, having listened to the conversation today and made some notes, I am struggling to have any kind of confidence that those conversations might be fruitful in terms of forecasting. It strikes me that what is emerging is an organisation that is possibly struggling with a new kind of economic paradigm. I wondered whether you felt that the Bank, in its decision-making, was trapped in a pre-2008 mind-set, whereas we have a post-2008 economy and an economic psychology in the population, and you are struggling to catch up. Most of the people, I would imagine, at the MPC learnt their craft pre-2008 and accepted the shibboleths of economic forecasting from that period. We have heard today about some of the significant changes—the deflationary effects of the internet, the changing nature of the job market, perhaps newly embedded expectations of what interest rates are going to do over people's lifetimes, and other things like the penetration of 24-hour media and social media and its ability to lead opinion rather than report opinion on the economy.

A general sense that I get from my business life is that we are in a "sod it" economy, where people think, "I cannot hang around and wait for things to happen. I have to be positive whatever happens because my life is eking away". People under the normal curve who are economically active in their forties and fifties are thinking, "Do I really have to wait until I am 60 to grow my business?" Is that a challenge for you from a forecasting point of view? It sounds to me as if you are putting some work into fundamentally reviewing your ability to forecast the economy in the way you used to be able to. If you look at your fan charts, for instance, they are widening, on a quarterly basis, around the central forecast.

Dr Mark Carney: Okay, there are several things in there, some with which I agree and others that I do not recognise at all. I do not think that the Bank is in any way, shape or form caught in a pre-2008 mind-set. Replaying the 2008 thing is to miss the much broader set of issues that we are discussing. The nature of the institution, given that it has an FPC that is designed to look at the tails around the central distribution—the wider bits of the fan chart and what could happen in those situations and what, if anything, can be done to mitigate those downsides—and is not just a passive observer of that but has been an active driver of policy shows that the institution has moved on.

Whether its judgments are right or whether it is missing things we can obviously debate, as we do rightly, when the FPC comes here, but I do not think it is a pre-2008 thing, nor do I think that the people you see in front of you are caught in some time warp. I am afraid I was the Governor of a central bank that made it through the 2008 crisis and did things in order to do so, so I am going to bridle again at the aspersion.

In terms of the nature of the economy changing, though, you are absolutely right. Look at the nature of the labour market, the rise of simplified into gig economy-type effects, and how that is affecting wage-



bargaining. Look at the impact, which is still relatively nascent but potentially quite substantial, of machine-learning and AI and what that is going to mean for wage and inflation dynamics; that is something that Andy talked about more than a year ago, to some derision, I would say, in terms of observers asking, "Why would you possibly be raising this because it does not immediately affect the inflation horizon?" It will be affecting the inflation horizon at some point, just like the advent of China into the global trading system 15 years ago started to affect the inflation horizon. We are looking at these types of issues. The ageing of the population, the debt burden and how that changes consumer behaviour is again something we are spending a lot of time on.

Q99 Kit Malthouse: Sorry to interrupt; we are short of time. It sounds to me as if you are aware of this stuff but it has not yet been woven into the forecast. Dr Vlieghe said that he did not have any confidence in forecasts at the start. What I am struggling with is asking about future scenarios when the fan charts are so wide.

Dr Mark Carney: The reason I raised the scenario point is that it is a way to make the bands of the fan chart tangible. What is the scenario where there is going to be an upside—a significantly higher pace of growth in the UK, higher inflation and therefore consequences for policy? What we are trying to do with our forecast—and this has been a process over a number of years—is to be clearer and clearer and clearer about the key judgments, not just in the Stockton tables, so called because they came out of a review by David Stockton, but also in terms of when we communicate our policy message.

You can judge if we should do something else, but I believe we have been as clear as we could be that there are three key judgments in this forecast: about inflation expectations and pass-through; around what we have been discussing in great detail—rightly so—around this labour market judgment and what it means for wages; and thirdly, which we have also rightly been discussing, around consumer behaviour and whether there is going to be this slowing of consumption as real incomes start to get hit. That is part of the way we do it.

There is a fair question about bigger structural forces—the gig economy, machine-learning and other factors. I think we should continue to do research on those, and try to scope out how they could affect the economy. I think you would support that.

For the immediate forecast, which we are talking about today, it is about how we make the tails in the forecast more tangible. Should we be more explicit about downside risk and upside risk and how they could come to pass? We have done that a bit in the past. We could probably do more of it. The challenge always in doing it is the risk becomes a prediction; quite frankly, some of the things we have talked about in the last few sessions have been because in the past we have said, "There are scenarios that, if they happened, could mean this" and we have to be cautious of it.



Q100 Kit Malthouse: This is one of the issues: whether your predictions are self-fulfilling, and whether people migrate to what you are predicting rather than your prediction being a true reflection of behaviour. For instance, look at food inflation. You have a section in the report, on page 26, on food price inflation, which you quite rightly say is one of the things that affects people's idea of inflation generally, particularly for consumers.

It is hard for me to tell. It says in the report that the sterling depreciation that you say will largely drive inflation has not yet gone through to food, and yet we have seen some large companies, like Unilever, take advantage of that position to try to push prices up on Marmite; there are other issues like that. I am never quite sure whether Unilever look at your prediction of inflation and say, "Do you know what? Here is our opportunity to fulfil that prediction. We can either be more efficient as a company or we could take advantage of the market situation where there is an expectation of inflation, so why not fulfil it?"

Dr Mark Carney: I do not think that is the case. We can have material impact on the economy when we change policy. We cannot guide the economy to a better outcome. We cannot make it so by saying it so. We can help explain what is going on. For example, we are going to go through a period of above-average inflation—inflation above 2%. That is our forecast. It is fairly well recognised that that is the case. Hopefully, it is also fairly well recognised why that is the case, that it will be temporary and that we intend, within limits, to look through it, which makes it less likely that that becomes self-perpetuating. However, underlying all of what I just said is a policy judgment or a policy stance that would adjust to make it so, as opposed to a pure forecast that decrees that it will happen.

In terms of the retail market, we followed the specific situation you talked about very closely, and we talked to the major and smaller retailers carefully, as well as the major branded product suppliers. The one thing you saw in that situation, and in many others, is that this is a very competitive market. On the idea that some central agency, whether it is the central bank, Government or someone else, is directing that competitive market, I just do not think that is the way it works. Our job is to figure out how that competitive market will resolve the tension between the margin of the retailer, the margin of the supplier and the consumer's ability to pay.

Q101 Kit Malthouse: When, for instance, we look at food, you say that the depreciation in the pound has not yet fed through to food prices, but you seem to think that will not last indefinitely. When you balance the rise in import costs, what do you balance it against from a deflationary point of view? I asked you last time we met about the deflationary effects of the internet, for instance, so there is the strong penetration of e-commerce, the automation of supply, and the wide global supply chain that the supermarket industry has, combined with this incredibly competitive environment. Surely the food prices are as likely to stay static, given



HOUSE OF COMMONS

that, as they are to rise, notwithstanding the depreciation.

Dr Mark Carney: When you look at the broader range of products that are supplied through supermarkets, a significant proportion of the imported inflation will be managed by the suppliers finding other efficiencies and those broader secular trends. That has been consistent, not just with history but with discussions with them specifically, so not everything is showing up. On food, it tends to be substantially passed through, once hedges roll off and prices change. When you go down the fruit and veg aisle, that tends to be moving with the underlying prices of those products. When you go to refined packaged goods or other products, they have more leeway. Then, in terms of overall cost, I do not need to tell you: it is arguably the most competitive food retailing sector in the world, with constant incredible innovation. That is one of the reasons why you do not get as much of the pass-through. We are taking that into account.

Q102 **Kit Malthouse:** No, I understand. On your food price predictions, would it be fair to say it is as likely that the industry will be able to iron out those inflationary effects as it is that it will just pass them through?

Ian McCafferty: I would find that very surprising, to be honest. When the raw material of that imported food cost has risen by 20% since last November, with the depreciation of the pound since the end of 2015, given the weight of that in the total retail price of the product relative to the cost of distribution and other factors that you refer to, I would find it very surprising if firms were able to simply smooth that through and not pass any of it on.

Q103 **Kit Malthouse:** That is notwithstanding the fact that you say they broadly have so far.

Ian McCafferty: What we have seen so far, and what we have learnt from our agents and from discussions with individual suppliers, is that there has been some hedging, so it means that some of the depreciation of sterling has not yet fed through into the raw material cost. There has been some strategic planning of price rises; very few retailers would like to put prices up in the week before Christmas, for example. From that point of view, there are going to be lags in the system between the rise in wholesale prices and rises in retail prices. Then there is the balance of power between wholesalers and retailers, which means the pace at which those prices come through, as well as the extent, is going to be subject to some lags.

Kit Malthouse: I have two more very quick questions.

Chair: It will have to be one. It really will have to be one, and it will have to be brief.

Q104 **Kit Malthouse:** Just one comment, then: on QE, Mr Haldane just said, in response to Helen Goodman, that QE had boosted asset prices to some extent. I have a memory, Governor, that when we last met to talk about



HOUSE OF COMMONS

this you said that was not the case, but we will leave the debate on money supply for later. I just wanted to ask a quick question about forward guidance. Last time we met, you said forward guidance was neutral: that rates could go down as well as up. This was in November. Is it now the case that your forward guidance is that rates are going to go up twice in the forecast period?

Dr Mark Carney: There are two things. First off, my comment on QE last time was related to a comment by Mr Baker, who said he had a friend in Chiswick who worked in the City, who said that the only reason house prices had gone up was because of QE, and I was disagreeing with that. If we are going to quote me, let us try to be consistent. I am sure you do have a friend in Chiswick; I am not denying that.

Mr Steve Baker: I am grateful.

Chair: He has lots of friends in Chiswick, but we are after the second part of the question.

Dr Mark Carney: Just to be clear, the forecast is conditioned on the market curve at the time we made the forecast. The market curve at the time we made the forecast has two rate increases, so that is what the market had expected. I will leave it at that, since we are out of time.

Q105 **Kit Malthouse:** What is the forward guidance at the moment, then? Is it still neutral?

Dr Mark Carney: There are scenarios where rates could rise at a faster rate than the market curve, and there are ones where they would rise more slowly.

Q106 **Chair:** Is that a yes?

Dr Mark Carney: We did not come to a view as a committee on explicit guidance that we wanted to give, so I am not going to invent one now.

Q107 **Chair:** We might start asking that question more often, Governor.

Dr Mark Carney: If you are such fans, yes, we will supply it.

Chair: Since you introduced forward guidance, it is a relevant question to ask whether there is any. At the moment, we are not clear whether there is some.

Dr Mark Carney: There are scenarios where rates could rise faster; there are scenarios where they would rise more slowly. Different members would ascribe different probabilities to those. The most important judgments around that pace have been clearly set out by the committee, around inflation expectations, around wages, around areas of consumption growth.

Q108 **Kit Malthouse:** Is that a change from November? You specifically said in November that forward guidance was neutral. You are now moving to saying, "It will be a rise; we are just not sure how swift a rise it will be".



HOUSE OF COMMONS

Dr Mark Carney: That is not some dramatic discovery. Anyone who knows our forecasting convention knows that we use the market curve. The market curve in November had a slight dip down in policy rates and then a milder increase thereafter. The market curve we used for this one has a mild increase.

Q109 **Chair:** For forward guidance to have meaning, Governor, it needs a direction, does it not? There seem to be three possibilities: one is up; one is down; and one is neutral.

Dr Mark Carney: We are not providing any explicit guidance. The committee did not provide explicit guidance in this round.

Q110 **Chair:** You are not prepared to say that that amounts to it still being neutral.

Dr Mark Carney: Speaking as the chair of the committee, I am not prepared to go further than what the committee said at the time, which I think is appropriate.

Chair: As I think you can tell from the tenor of this hearing, it is quite likely that this Committee will come back to this and we will ask you whether you have had a chat about it next time you are here.

Q111 **Mr Steve Baker:** Good afternoon. Governor, I was not going to satirise the Bank, but after the Chiswick comment I am tempted to focus on the highly amusing commentary that has emerged during this session on Twitter from JediEconomist. I will just leave that out there for the journalists to have a look at.

Dr Mark Carney: Are you saying your attention was not riveted to our testimony?

Mr Steve Baker: I briefly had a little search to see how the press were covering your commentary. It has been very interesting.

Chair: I am afraid you will have to be brief; otherwise, we really will be out of time.

Q112 **Mr Steve Baker:** The point is this. It has been a very interesting session on economic expectations and the Bank's role in setting them, and in particular, Andy, you said something—I cannot quote it literally without a transcript—in relation to restoring inflation expectations: "This was a direct response to some of the actions we took". In the last Q and A, Helia Ebrahimi of *Channel 4 News* asked the question to you, Governor: is it becoming more difficult to be a central banker when political commentary is becoming more and more influential and more unpredictable? In your answer, among other things, you said, "In many respects, we are coming to the last seconds of central bankers' 15 minutes of fame", to use the Warhol line, "which is a good thing". I realise that was quite a light-hearted answer, to get out of commenting on President Trump.



HOUSE OF COMMONS

Andy, given what you have said about the importance of the Bank being able to set inflation expectations—to interpret what you said—surely you do not want central bankers’ 15 minutes of fame to come to an end. You need to retain this power to steer markets, in order to achieve your objectives, do you not?

Andy Haldane: We certainly want central banks, including the Bank of England, to maintain credibility in their pronouncements on monetary policy, and we would hope that those credible pronouncements would in turn shape inflation expectations in a positive way, anchoring them around the target. I am not sure anything that Mark said cut across that remotely. Doing just that would be an ongoing, “back to the future”, traditional role of central banks.

What I took to be the real force of Mark’s point, though—and this goes to Mr Malthouse’s question—was that the world is plainly going through a very large, significant number of long-term structural shifts, be they technological, labour market-related, demographic or what have you. The Bank has an interest in those to the extent that they bear upon our objectives, including for inflation and financial stability, but ultimately our tools cannot do anything to reshape or, indeed, much cushion the longer term impact of those structural shifts. Ultimately, that falls to longer term structural policies, rather than shorter run monetary policies. In that sense, if policy were in the early stages or maybe even the latter stages of a pivot away from the monetary and towards the structural, that would be a welcome reflection of the structural challenges that the economy and financial system face.

Q113 **Mr Steve Baker:** I have two questions that follow on from that. The first is this: accepting, from what I think you have said, that it is desirable for the Bank to continue being able to set people’s inflation expectations, to Ms Ebrahimi’s question, is it becoming more difficult for you to do those things that you need to do on expectations, given that politicians are saying things that shift expectations quite dramatically, and in this particular case a Trump economic adviser has shifted the currency markets? Is your job becoming harder in the context of political pronouncements that cut across what you are trying to do? Is there a message that you need to convey to politicians about what they say that cuts across your remit in relation to economic expectations, Governor?

Dr Mark Carney: No, I am not sitting here today thinking that there is a particular message we need to deliver. As Andy is saying, we are moving into a phase where fiscal policy and, most importantly, structural policy are going to be much more important. The country is embarking on one of the biggest structural policy shifts in a generation, and how it plays out is going to be the biggest determinant of future prosperity. In that context, we need to manage expectations about what our role is, which is to support monetary and financial stability, and support the adjustment by providing those foundations, as opposed to being able to determine the bigger factors.



HOUSE OF COMMONS

It does mean that, any time you have big shifts in structural policy, potential fiscal policy and potentially, from outside the UK, attitudes to the relative value of open global financial and trading markets, you are likely to have bigger volatility around asset prices. We have to deal with that, as opposed to trying to lean against it.

Q114 Mr Steve Baker: You made the point, when you went on, that it is much better to move forward to fiscal and trade policy being relevant than, as you put it, “the only game in town being central banks and monetary policy”. Is it even possible for us to move on from central banks and monetary policy being so dominant when monetary policy is still extraordinary? The extraordinary is becoming normal, is it not?

Dr Mark Carney: This is exactly the point. The encouraging scenario is that, as other policies become more active, they help to raise the equilibrium interest rate, which means that normalisation, to an earlier question, of interest rates moves to a more normal level. By this I mean that, right now, the fact that we have been close to a global liquidity trap, close to the zero lower bound, because other policies have not been as active in so many jurisdictions, has meant that monetary policy has had a bigger, and disproportionate, weight. It has also meant, alongside some of the other bigger factors that were mentioned, that the equilibrium rate at which you can determine whether monetary policy is stimulatory or contractionary is much lower—though it is hard to be overly precise—than it was historically.

As you get shifts in public and private savings, public and private investment, structural changes, increases in productivity—all those factors—the interest rate moves up and then monetary policy, at a given level, gets more traction and it can normalise. The two are very much connected. The stance of monetary policy is, in some respects, a symptom—I am talking not domestically but globally—of the relative absence of meaningful structural reform and structural change that helps to boost productivity.

Q115 Mr Steve Baker: You have given a very clear answer about the direction of travel there and how you see it evolving. Would you agree with me very simply that you are not likely to escape your dominant position as a big player in the economy until you have reached the point where interest rates and monetary policy overall are much more normal? What does more normal look like, so that you become a less important and dominant player in the economy?

Dr Mark Carney: We are not the determinants of long-run prosperity, so we are not dominant at all. If we get things horribly wrong on the financial stability side, then we can have a big influence on longer term outcomes, and we are obviously working hard to make sure that is not the case and we learn the lessons of 2008. We are obviously very influential on the short-term path, but long-run prosperity is in the gift of the private sector. We all know what the biggest influence is going to be, which is the outcome of the negotiations with the European Union and



HOUSE OF COMMONS

other economies, and the domestic reforms that that process catalyses. Those are the dominant influences. We are a sideshow to them.

Q116 Mr Steve Baker: There are several departure points from that conversation. I am just looking at the FTSE and how it has risen since the vote. It brings to mind the LSE Hayek Lecture from 2010 by Jesús Huerta de Soto. If I was to summarise it, he was talking about the cumulative microeconomic consequences of monetary policy. If I was to put it in a nutshell, his suggestion, I think it would not be unfair to say, was that the sort of rise in the stock market that we have seen could be attributable to the stance of monetary policy since the vote. I take it from what you have said that you would refute that. If you do refute it, to what do you attribute the almost continuous rise in the stock market since the vote?

Dr Mark Carney: The drivers of the FTSE since the vote—broad brush—have been the shift in the currency, given the predominant foreign currency earnings of the FTSE 100; the improvement in the global economy; and the resilience of this economy. The resilience of this economy has been, on the margin, reinforced by the stance of monetary policy and other policies, but underlying those are the issues that we have been discussing. As you know, the FTSE 100 is interesting. It is not the best asset price to judge the underlying health of the UK economy, given the composition of that market. The FTSE 250 has also performed well, after an initial dip, once it was clear that the economy was going to perform. It has underperformed relative to other advanced-economy indices, for what it is worth.

It is also interesting—and this is not a comment on the stance of monetary policy—that the 10-year gilt has gone sideways since the vote, despite short-term domestic economic momentum, despite a reflationary shift in most other advanced-economy bond markets, despite increases in inflation compensation and term structure in most advanced-economy bond markets. There is a judgment at present—it does not mean it is right, and I make that big caveat, because financial markets can change their mind and get things wrong, as others do—of shorter term momentum but slower further out. To bring it back to the topic at hand, the judgment of asset markets is consistent with a stance of monetary policy that is appropriate for the inflation target in the medium term.

Q117 Mr Steve Baker: I am very conscious of time, because I notice how many colleagues have disappeared. I am sure we are trespassing on all our next meetings. Just to move on, Eric Albert from *Le Monde* put to you that the financial stability risk for the EU is not as big as you have suggested, and it might be bigger for the UK than the rest of the EU. You gave a very strong response, Governor. You said, “I totally disagree with your logic”. In the conclusion to your answer, you said, “Now, the one thing I know is the capacity is here, the collateral is here, the people are here, the capital is here, the expertise is here, the supervisory ability is here, the clearing is here. So the one jurisdiction that is going to have



capacity is the UK". Is there something that you would like to say about what is in everybody's best interests, in order to deliver—how did you put it?—a transition that is convenient, with workarounds? Is there a message about what should be done by all the nations of Europe, in their own best interests, in relation to the City?

Dr Mark Carney: There are two things. One is that, at the endpoint, they recognise that there is tremendous value to Europe, as there is to the UK, of that capacity, core expertise, capital, investors, infrastructure, supervisory expertise. If you are going to have a sector that is nine times the size of your GDP, you need to have breadth and depth of experience in supervising and managing it, in order to ensure that the risks that come with something of that scale do not spill over. First and foremost, it is of benefit to Europe—I will not go through all the statistics—predominantly as a supplier of capital, hedging, derivatives and foreign exchange for Europe. There are real risks in trying to shift a substantial proportion of that business. Getting the endpoint right, when we start from a position of having exactly the same rules, clear lines of sight and very tight supervisory co-operation are highly desirable on both sides. At a minimum, having a smooth transition from wherever we are today to whatever endpoint is determined is in everyone's interests.

Q118 **Mr Steve Baker:** You have brilliantly avoided giving me a quotable answer. Would you agree that it is in everybody's best interests that the City flourishes after we leave the EU?

Kit Malthouse: That is easy.

Dr Mark Carney: That it prudently flourishes, yes. I agree that it is in everyone's best interests that the City prudently flourishes.

Mr Steve Baker: Thank you very much.

Chair: They were all sitting on the edge of their seat down the road, waiting for your answer to that question. Thank you very much for coming to give evidence. We have heard quite a few things. We have heard that the Bank has not changed its long-run view on Brexit's effects on the economy yet—we heard that from Mr Haldane—and that there have been some terrible errors in forecasting; I think that was your phrase. Mr Vlieghe said, on forecasting, that we probably will not get the next one right; we will not forecast the next form of crisis. I think that is pretty much what you said, which many of us round this table might agree with. We have also had an interesting exchange on forward guidance, where it appears the MPC does not have a view on whether there is any operative forward guidance in play at the moment.

We have learned quite a bit and we are very grateful to you for coming to give evidence. We will be following up a number of points, particularly on the agents issue, in due course. Thank you very much.