Treasury Committee

Oral evidence: Bank of England Inflation Reports, HC596

Tuesday 26 February 2019

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Watch the meeting

Members present: Nicky Morgan (Chair); Rushanara Ali; Colin Clark; Mr Simon Clarke; Charlie Elphicke; Stewart Hosie; Catherine McKinnell.

Questions 355 - 409

Witnesses

I: Dr Mark Carney, Governor of the Bank of England; Sir Dave Ramsden, Deputy Governor, Markets and Banking, Bank of England; Dr Gertjan Vlieghe, Member of the Monetary Policy Committee, Bank of England; Professor Jonathan Haskel, External Member of the Monetary Policy Committee, Bank of England.

Written evidence from witnesses:

– Dr Mark Carney, Sir Dave Ramsden, Dr Gertjan Vlieghe

Examination of Witnesses

Witnesses: Dr Mark Carney, Sir Dave Ramsden, Dr Gertjan Vlieghe and Professor Jonathan Haskel.

Q355 **Chair:** Good morning to everybody from the Bank of England. Thank you for being here this morning. I am going to ask you all to briefly introduce yourselves, for the benefit of those watching. You are being beamed on BBC Parliament, as well, this morning.

Dr Carney: Mark Carney.

Dr Vlieghe: Jan Vlieghe.

Sir Dave Ramsden: Dave Ramsden.

Professor Haskel: Jonathan Haskel.

Q356 **Chair:** Thank you very much. Governor, let me start with you. I understand the Bank has, this morning, made an announcement about a temporary amendment to its liquidity insurance facilities. Could you give us some more detail on that?

Dr Carney: Yes, thank you, Chair. As a bit of context, first, we have regular updates on our liquidity facilities, effectively each month. We have been running sterling liquidity facilities on a monthly basis for some time. That is the normal course of business. In the run-up to the referendum, we moved to weekly sterling auctions, and held it for several months after the referendum. We have decided, given the coincidence of two events—the fact that we had to give the update for our schedule of these auctions, and the fact that we are appearing in front of the TSC for the purposes of accountability—to move to weekly auctions of sterling liquidity.

I have a couple of other quick points of context. There are about 100 banks and building societies that are eligible for these auctions. They are part of our normal sterling monetary framework. They bid for liquidity. These institutions have prepositioned collateral with us that, once that collateral is discounted, gives them the right to borrow up to £300 billion of liquidity.

As a final point, we are not seeing any liquidity stresses in the market. At the most recent auction we had, a few weeks ago, there was some bidding, but the bidding was basically around the minimum price, so effectively a few basis points above Bank Rate. The outstanding on the facilities right now is about £9.5 billion, whereas post-referendum it peaked at around £22 billion. It is about prudence and precaution in advance, and the timing comes together just because of the calendar of these auctions and the fact that we are appearing in front of you.

Q357 **Chair:** We like the Treasury Select Committee to drive certain announcements. There is nothing to be read into this, nothing that people watching should be alarmed by.

Dr Carney: No, there is no signal in it, except that it is part of normal contingency planning, just like, if I can put it in the broader context, the major banks and building societies themselves have around £1 trillion of high-quality liquid assets on their balance sheets already. That is part of their contingency planning. We are on daily monitoring of that. This is supplemental to that.

As a last point, that £1 trillion on balance sheet, on an apples-to-apples basis, is more than four times what they would have had in the run-up to the crisis. The system is very liquid, as it should be, and we stand ready to provide liquidity in all major currencies.

Q358 **Chair:** Thank you very much. I want to move on. It will not surprise you that a lot of this morning will be spent discussing the UK's exit from the EU and where we stand at the moment. Obviously preparations for a potential no deal outcome are very much uppermost in people's minds.

Dr Vlieghe, I wanted to start with you. You have given a very interesting speech, and so has the Governor, in recent days. In the speech that you gave on 14 February, you said, "In the case of a no-deal scenario I judge that an easing or an extended pause in monetary policy is more likely to be the appropriate policy response than a tightening". What precedence and evidence has led you to that conclusion?

Dr Vlieghe: First, can I point out that I completely agree with the communication of the committee so far? That is to say, interest rates can move in either direction, in the case of a no-deal Brexit. I was in favour of going a little further, putting some probabilities on it, and saying, "Just because they can go in either direction, it does not mean that each one is equally likely". It is a judgment call. We cannot be certain about these things. It is still a probabilistic assessment.

What is it going to depend on whether rates go down or up in a no-deal scenario? I take it as given that there is going to be some economic disruption on the supply side, possibly severe; we do not know. That bit does not drive monetary policy. Monetary policy cannot prevent supply-side disruption. What matters is whether, as a result of that disruption, you get a larger fall in business confidence, household confidence and therefore demand, which requires monetary policy to support the economy, within a framework of trading off support for the economy against a temporary overshoot in inflation above the target, which is no doubt going to be the case, because we expect the exchange rate to fall and then there is a possibility of tariffs on top of that.

These are all the things we will be taking into consideration. On balance, the risk is that the hit to confidence will be sufficiently large that we will not have to tighten. We will be thinking about either keeping policy on hold or easing. In the end, the proof will be in the pudding. We will have to see when it happens, and we will have to respond in real time. It will be difficult, but decision-making under uncertainty is what we always do.

Q359 **Chair:** Households remained confident about the economic situation and they continued to spend after the referendum result itself. Why do you think a no-deal Brexit is likely to be different from the way households responded then?

Dr Vlieghe: The biggest reason it is likely to be different is that, previously, we were talking in hypotheticals about expectation of possible future disruption, which some people put a lot of weight on and some people do not. Now we are talking about actual disruption happening. Even those people who are in the camp of not thinking that is very likely, if it is actually happening, will update their views very quickly.

Q360 **Chair:** We have talked in the Committee before, and have asked other committee members, about the benefits of being more explicit, with more forward guidance, about likely monetary policy. I am going to ask other committee members to comment on this more broadly in a moment, but do you think it is helpful to give businesses and households more of an idea as to what might happen? Is that a role for the committee, to enable people potentially to plan in advance?

Dr Vlieghe: I do think it is helpful. I set this out at length before this Committee a year ago. I am generally in favour of saying a little more, but this is a committee decision and other committee members feel differently, so we strike a balance somewhere in between. I am always on the side of favouring saying a little more, because I do think it is helpful, and I will continue to argue that case.

Q361 **Chair:** Sir Dave, let us start with you. Where are you on giving people guidance about what is potentially going to happen to monetary policy in the event of a no-deal Brexit?

Sir Dave Ramsden: On the first point, I am very much in favour of giving guidance. We gave a range of guidance through last year. Back in the summer, we updated our guidance on QE. The guidance we are talking about here was the guidance we gave in November on our thinking about the future stance of policy and different Brexit outcomes.

I must admit, I was comfortable with the guidance as far as we took it. We said that policy could move in either direction, depending on the Brexit outcome, and that there was no automatic assumption as to which direction it would move in based on which outcome. I am still comfortable with that. Jan has gone a bit further, as he said. He has made a judgment on what he thinks is the balance of probabilities in a no-deal, no-transition outcome. I would genuinely want to wait and see how the situation unfolded.

In particular, Jan has talked about the interaction. We have all assumed that in no deal, no transition there would be quite a lot of disruption. I would expect demand in the economy to slow, but I would expect that disruption to also create challenges for the supply side. There is a distinction between temporary challenges, such as how long it would take for logistical issues, say at the ports, to resolve themselves, and over a longer period you would expect a hit to productive potential. I would want to be looking at the situation as it unfolded. I guess, as Jan said, the proof will be in the pudding of what we would be actually looking at.

Two other things would lead me to be a bit cautious. First, on what the supply shocks of no deal, no transition would be, this is very rare, so we really do not have much to go on. In the document the Bank published in the autumn, we looked at the New Zealand example after it lost Commonwealth preference. We would be looking at a lot of different indicators to try to make sense of what was going on.

As a final point, one thing I have noticed, which the committee has drawn attention to, is that some inflation expectations measures, particularly those derived from financial markets, have moved up a bit, whereas they have fallen in the US and euro area. Indeed, we had the Citi survey of households on Friday, which suggested that household expectations of inflation are holding up, even as headline inflation comes down. Citi was arguing in its piece that inflation expectations may be more influenced by people's Brexit expectations, rather than headline inflation. A lot of different things would go into the mix, but that is why for me, coming back to your question, I am not in a position to put a probability on what is more likely around no deal, no Brexit, and what would happen to monetary policy at this point.

Q362 **Chair:** Professor Haskel, where are you on all this?

Professor Haskel: I am very much with Sir Dave on this. In my reading of Jan's really good speech, there were two elements to it, as he mentioned. First, how do we think generally about the effects of Brexit? We have to look at the effects on supply, the effects on demand and the effects on the exchange rate. I am new to the committee, as you know. That is what the committee has been saying at least since I joined, and I think it had been saying it for quite a while before then. I do not think there is any disagreement, certainly from my side, on that general framework. I support Jan in his clear outlining of that framework in the speech.

I am a little more hesitant, and therefore I am a little more with Sir Dave, as to whether we can make a prediction about what we think will happen in these amazingly uncertain times. As Dave was just saying, we have not had anything like this before. The New Zealand case, which we looked at a little in the *Inflation Report*, was bound up with an oil shock at the same time. It is very difficult to do that. I am hesitant about making predictions for that reason.

My second slight reservation is that, if one makes a guess about future outcomes, some people may interpret that as a promise about what will actually happen. There may then be some bad outcomes. That is where I stand on that.

Q363 **Chair:** Governor, if the outlook for interest rates and what is going to happen is so uncertain, and other members have said we will wait to see what happens and look at various indicators, is it a question that will take a while for monetary policy to develop, or would you have to take potentially more urgent action in relation to interest rates, depending on what happens?

Dr Carney: Chair, in the first bit of this questioning you started with households and businesses, and we should go back to that. What would our message be to households and businesses, if a no-deal, no-transition scenario were to come to pass? The message will be the same as the message today: we will provide all the stimulus we can, subject to delivering price stability consistent with our remit. In other words, we will provide the support to the economy we can, while keeping inflation low and stable.

Now, the challenges with actually doing that are that a no-deal, no-transition Brexit will be inflationary. There will be tariffs; that is directly inflationary. The exchange rate is likely to depreciate, perhaps substantially, which is also inflationary. As my colleagues have just described, there will be an element of reduction in the supply capacity of the economy. How quickly demand adjusts relative to that could potentially add to those inflationary pressures in the short term.

We have an ability, although it is not unlimited, to provide some support even in those circumstances, subject to bringing inflation back sustainably to target. We will do what we can, but we should not oversell what we can do. The real drivers of economic outcomes here will be what happens to the productive capacity of the economy, and then the reaction of businesses, households and our foreign customers, the customers of our exporters.

The other thing we can do, just to reinforce this—and we have done it and we are confident of the position, stepping away from the MPC to the Bank as a whole—is to ensure that the core of the financial system is ready for whatever form Brexit takes. That is the case. We have various mechanisms to reinforce that, and we just announced one of those a moment ago. We have the financial sector there to support the economy. We will provide the support we can, but ultimately the remit given to us by Parliament, for the right reasons, is to deliver inflation at a 2% level in a timely fashion.

Q364 **Chair:** I want to turn very briefly to something completely different, Governor. This is about the retention of ethnic minority staff in the Bank. At November's meeting of the Court of Directors, you said that there was underrepresentation of ethnic minorities at the Bank "on every metric", and there was a particular problem with retention. There is an article in the *Times*, from 19 February, which talks about ethnic minority staff being more critical of the organisation's culture on every single measure: inappropriate language and behaviour; failure to fit in having an impact on their career progression. BAME employees perceived a lack of transparency in hiring, firing and promotion decisions, and were critical of the Bank's narrow recruitment base. This is not good.

Dr Carney: I will say a couple of things. First, on the article and the minutes, up until about five years ago, the Bank published the minutes of Court after a century. Now we publish them six weeks after the Court meeting, which is right. The reason we do it is so we are held to account, as you are doing now.

Secondly, Court and the senior management of the institution are very seized with these issues. Diversity and inclusion are one of the four pillars of our strategy and have been for the last several years. We have made considerable progress on all metrics of diversity. We have talked about gender, and can come back to that if you wish, but let us focus on BAME diversity. The proportion of Bank staff over the course of the last five years has gone from 13% to 19%. BAME individuals have gone from 2% to 5% of senior management. Our overall new-hire recruitment is 39% BAME in the last year. We are really shifting the dial. That is the product of a number of initiatives, from needs-blind recruitment, to inclusive management policies, to pooled hiring mechanisms. We are making real progress.

What I would take from the Court minutes and the focus here is that we are not satisfied with the progress that has been made. It is not just about numbers. It starts with numbers, but it involves the experience and progression of those individuals, and transparently the progression at the Bank of England of our BAME colleagues is notably different or worse than of other colleagues. We have been digging deeper. Why is that the case?

We think that—and this is a common issue, not just around identity diversity, but also around cognitive diversity—some of this has had to do with the way traditional central bank structures are very hierarchical, and the nature of decision-making and process at the institution. That is why, about 18 months ago, as part of the latest iteration of our three-year strategic plan, we have been focusing on changing how we work. Some of this sounds trite, but it is incredibly important. How long is a memo for a meeting? Who is in the meeting when you make a decision? How do you go round the table and draw out people's perspectives? How do you brief back how a meeting went and what happens next? Do we have sponsors for up and coming individuals? How involved is senior management in recruitment and in affinity and identity group activities within the institution?

All of those things are changing, ultimately to make us more effective at doing our jobs and have better decision-making, not relying on one or two individuals to make decisions, but having the full weight and perspective of the institution in making decisions. Our view is consistent with the discussion at Court that you referenced in those minutes, and the one that you will see come out in three or four weeks, from the last Court two weeks ago, which was the follow-up to that discussion about what the new taskforce is going to do on BAME development in the Bank, how much we are going to widen our sponsorship programme and our mentoring, how well recruitment has gone and what else we can do.

The last thing is something that we do think has worked very well, which we put in place about 15 months ago. As you start to move to mid-to-upper senior management, we were making a series of decisions sequentially, or in isolation. Now we are pooling and batching those together, and that has multiple advantages. One of the advantages—speaking for Dave and myself, and the other governors—is that we are in the room when the decision is made.

It is about the specific promotion, of course, but it is also about the three or four people who do not get promoted. Why do they not? What experience do they lack? What else do they need in the organisation? What is the game plan to get them that? In some cases, they are in a position where their future probably is not at the Bank, but we deal with that.

It needs to be across the board. The message I would ask you to take from this is that it is a top priority. We are focused on it. We have made a lot of progress, but now we are getting to the point—and I would suggest with gender, as we get up to that 35% of senior management level, it is the same thing—where you need to redouble the efforts and make a broader change in how you run the organisation, to move further.

Q365 **Chair:** I have two quick questions. First, recruitment numbers are fine, but is the retention or turnover figure measured as well?

Dr Carney: It is measured. The turnover rate is 7.5% for the institution as a whole, but for BAME it is 9.2%. It is materially higher. As you reference, we do annual surveys of staff, and there are a series of indications of the extent to which people like the work environment, how productive it is, the extent to which they are mentored and managed. On most of those—and this is what is referenced in the minutes, which the article is rightly taken from—the experience is not as good. The experience, relative to national averages, is good in an absolute sense, but it is not as good as for others, and that is not acceptable.

Q366 **Chair:** I think you have asked that an action plan should be brought to the Court. When that is done, will you write to the Committee and give us an update on what the actions are?

Dr Carney: Yes, and it has been done since the previous Court meeting, so I will endeavour to write to you.

Q367 **Charlie Elphicke:** Good morning, Governor. You gave a really interesting speech earlier this month on the global outlook, and you referred to Brexit as an "acid test of whether a way can be found to broaden the benefits of openness while enhancing democratic accountability". Do you think there exists, in your view, a form of Brexit that could enhance the openness of the UK economy, and its competitiveness and productivity?

Chair: Charlie does.

Dr Carney: Fantastic. First, thank you for reading the speech. Secondly, probably the best way to answer that question is to restrict it to areas that directly touch on the Bank's responsibility, so with respect to financial services. In previous exchanges at this Committee, we have talked collectively about whether—and I will put it in simple terms—the UK is best served in all those respects, productivity, competitiveness, resilience of the system, and service to UK and global customers, by being a rule-taker. That is, if I could put it in these terms, a form of strict EU-style equivalence for financial services, where effectively we are mapping one to one the rules of the EU, not just as they exist today but as they change over time. That is one form, as against outcome-based equivalence: are we achieving the same standards of financial stability, market integrity and consumer investor protection?

We are of the view, and have been consistently over the last several years, that it is in the country’s interest and—this is a narrower point—better for the achievement of the Bank’s objectives, particularly of financial stability, if we are in a circumstance where we have some flexibility in how we achieve financial stability, with some slight differences in rules, potentially, that would evolve over time, all underpinned by supervisory co-operation agreements. I think you want to follow up, so I will pass it back to you, but I would not mind getting into the details of that.

Q368 **Charlie Elphicke:** Let me follow up on that. David Cameron spent ages trying to get integration of the single market with services, and frankly kept hitting a brick wall, because it was not in the interests of our European neighbours from their own selfish point of view. Do you think that trying to have commonality on services, as you set out in your speech, is an area that would bear fruit within the context of single market type co-operation, or would it be more likely within the context of the G20?

Dr Carney: In terms of the status quo, where we are today with financial services, we have flexibility on a number of key areas. As you well appreciate, the scale and complexity of the UK financial system is of a different order of magnitude than that found in any other EU member state. We have some very important flexibilities, which have developed over the years. Ring-fencing of retail and commercial banking, something that has come into force this year, is one example. We are active users of the countercyclical capital buffer, which is potentially relevant in current circumstances. We have active macroprudential policy on housing. We can vary some of the capital rules, so-called Pillar 2A and Pillar 2B rules, for individual banks, which we have done.

The effective prudential standards and macroprudential standards in the UK are quite tailored to our circumstances. For full disclosure, and we have testified to this effect over the years, we think we have the necessary flexibilities under the current circumstances to achieve our objectives.

Now, your question is on a go-forward basis, obviously. If we were in a circumstance where we had to take rules, and we were not at the table in order to adjust not every rule, but on occasion the most important rules that affected the UK system, we would have concerns that we would be taking risk with financial stability in the United Kingdom.

Q369 **Charlie Elphicke:** I greatly appreciate that. The other thing you said in your speech, which I thought was fascinating, was that “globalisation has contributed to higher imbalances of income and wealth in many countries. Amongst economists, a belief in free trade is totemic, but while trade makes countries better off, it does not raise all boats within them”. I take the example of France. Peripheral France is, frankly, in rebellion with the gilets jaunes movement against the metropolitan elite of Paris, for whom globalisation has worked really well. If you take London, the regions of Britain feel completely neglected, while London and the big cities are perfectly happy, because they have been the big winners from globalisation.

Do you have any views on how one rebalances that, so we can have a renaissance of the regions and coastal towns like Dover and Deal, which I represent, so we can have a Britain that works for everyone and a Britain that everyone feels they can be part of?

Dr Carney: It is a big question, and one that occupies you and others on this Committee on a daily basis, but it is a bit away from our direct responsibilities. I absolutely stand by what I said. It is basic to trade theory, and the reality of trade, that freer trade makes the country better off as a whole. But there needs to be some redistribution and some reinvestment of those gains in order—and now speaking like an economist—to make it Pareto optimal, so that all individuals move up. That needs to be a very deliberate strategy, whatever path of openness is taken.

In financial services, an issue that is top of mind for this institution, whatever form of Brexit we have, is how we provide the framework for new financial technologies and new approaches. There is a lot that can benefit the wholesale markets—let us call it "the City", to simplify—but the things that we are first and foremost focused on are those that would benefit small and medium-sized enterprises, be they in Dover and Deal, Dulwich or Dunfermline. I am running out of Ds.

Charlie Elphicke: Do not forget Doncaster.

Chair: Darlington.

Charlie Elphicke: Yes, and Dorchester.

Dr Carney: If I can reemphasise the bigger point that I am trying to get across, my argument in this speech is that these tensions in globalisation are starting to affect the global outlook. There are trade tensions with China and other aspects affecting the global outlook. They are bigger; they are structural; they require a more deliberate response, which has to have—and it is not our job to do this—some element of redistribution or reinvestment of the gains of globalisation to areas such as those you referenced, as well as getting this balance between democratic accountability and standards that are high enough, whether for financial stability, product safety or environmental standards, so we can have confidence that we can trade freely.

Q370 **Charlie Elphicke:** I should have mentioned not only peripheral France but flyover America. The whole issue is the world over. It is quite unusual for a central banker to be talking about balancing global trade with democratic accountability and sovereignty, as well as imbalances of wealth and income. Why did you decide to stage this intervention, and what message do you hope that Parliament and Government will take from it?

Dr Carney: It is interesting. It is not that unusual, I guess. I note that President Draghi's speech on Friday was entirely about these sets of issues.

The purpose of the speech was, first and foremost, to look at the global outlook. As I think you are aware, the global economy has been slowing. There is a question, increasingly voiced in some corners, as to whether this slowdown is going to become stagnation globally. It is obviously directly relevant to our purposes. I have a view, consistent broadly with the committee's view, that I do not think we will move to a global recession, but I am going through the risks that could tip it and the biggest one is—in my judgment, not necessarily the committee's—around globalisation.

Now, in that context, my personal view—and you may share it, given your line of questioning—is that the challenges around trade, globally, have structural drivers, such as we have just discussed. The solution is not a textbook solution: free trade is good; therefore we will have free trade. It needs to balance these aspects. Therefore, staying within remit and focus, the example that is relevant for the Bank, and maybe on a personal level relevant for my work at the Financial Stability Board, of which the Bank is obviously a member, is around how we can balance on financial services.

If I could make one last point on that, the announcement yesterday by the CFTC, the FCA and the Bank of England on the new arrangements for cross-border derivatives between the US and the UK, regardless of the form Brexit takes, is exactly an example of outcome-based equivalence. It shows that arguably the world's most sophisticated and complex market, which is the global derivatives market, 80% of which is in our two jurisdictions, can be managed successfully with this approach.

Q371 **Charlie Elphicke:** I have one last brief question. Also in your speech, you talked about how consumers get lower prices and new products, because technology means that prices tend to fall over time for the same product. Then you talk about how workers see their wages fall: lower prices, lower wages. What is your view of the outlook from the point of view of inflation, and whether that might lead to a deflationary or zero-inflation type environment?

Dr Carney: For the specific workers, lower-skilled workers in the most affected sectors, such as the tradable goods sector, there is a process of factor price equalisation—that is the technical term—but in effect, in many cases, it has meant lower, stagnant wages. There are many forms of reinvestment, and the most obvious form of reinvestment in that regard is training those workers and providing them with better opportunities. That is where you start to have trade lifting all boats.

To go to your question, when we look at it from a monetary policy perspective, this committee—and our predecessors, but us at the tail end—has to make a judgment. What has been the impact on prices of the integration of, effectively, China—it is more than that, but let us keep it just to China—on manufactured goods prices? Throughout the 2000s, up to and through the crisis, we had disinflation, or very low to sometimes negative inflation, for manufactured goods. This meant that services price inflation had to run above target in order for the balance to get to that

2%. The question is whether that is going to reverse, or whether it is starting to reverse, first.

The second point, which is impossible to judge right now, but is relevant as an issue on the table, is whether we are entering a period of de-globalisation, where there will be some fragmentation or potentially significant fragmentation of the global trading system, potentially capital markets as well, which would impart an inflationary bias, all things being equal, of which a no-deal, no-transition Brexit is an extreme example, but it is the same type of force.

I hesitate to recommend another speech of mine, but I am happy to send it to you. I gave one a year and a half ago at the IMF about exactly these sets of issues in a global context, and how de-globalisation would reverse that.

In some respects, as a last point, central banks had an easier ride for the first decade of this millennium, because of this disinflationary bias. It may be more difficult right after I stop being a central banker, actually, because if there is this period of de-globalisation it would impart some inflationary bias, which would make it more difficult.

Q372 **Rushanara Ali:** Good morning. I have some questions about uncertainty and contingencies. I will begin with Dr Carney, and then if others could contribute that would be great.

Dr Carney, at this Committee's hearing for the November *Inflation Report*, you acknowledged that the chances of no deal were "uncomfortably high", rather than an unlikely tail scenario. Then, at your February press conference, you said it was not the central scenario. Can you be more precise than that and just explain what you are getting at?

Dr Carney: Yes. My colleagues may want to jump in, but the approach of the committee since the referendum has been to condition our forecast on an average of potential Brexit outcomes and assume that there is a smooth transition to that average. We are not more precise than that, but you can think of the averages between a WTO scenario and something that is still Brexit while approximating elements of the EEA. Somewhere in between is the average, and there is a smooth transition to that.

Nowhere in that is a no-deal, no-transition, disruptive scenario. When you see the fan charts around our forecast, that is normal economic uncertainty in any forecast. It does not include a disruptive scenario. Now, for the purposes of financial stability—as you know, in other testimonies we have talked about this—we look at a disruptive no-deal scenario to help prepare the financial system for that, not a point forecast of that. The committee debated this in the run-up to the February report, and I have to say that, for full disclosure, we have been for the last several forecasts expecting, at the next forecast, to have a better idea what kind of deal we are going to have. That has not been the case.

Rushanara Ali: We wait with bated breath for the 12 o'clock statement today. Maybe the Prime Minister will say something different.

Dr Carney: We debated this and took the view, when we were putting our forecast together, that it was still more likely than not that some sort of agreement would be struck, and there would be some sort of transition to that. The confidence bands around that have changed as that has become more uncertain.

Maybe I will finish and hand back. The way we have dealt with higher uncertainty in this forecast—this is an important point—is that, as uncertainty has gone up, instead of just assuming that, after 29 March, all of a sudden everyone is certain about the future and they get on with it, we maintain that high level of uncertainty in our forecast for at least a year and then taper it off from there.

Now, we do not know anything specific about the prospect for negotiations, and we are not outlining particular outcomes, but it seemed reasonable to incorporate a greater degree of uncertainty in the forecast, and we have provided in the forecast a sensitivity, which you may want to come on to.

Q373 **Rushanara Ali:** Sorry, I just want to clarify. Does that forecast presume an extension? You mentioned you discussed extension of article 50. Is there an implicit expectation?

Dr Carney: No, there is not. To be absolutely clear, though, whether one calls it an extension of article 50, a transition period, an implementation period or a banana, we are assuming that we do not jump from the current membership of the European Union to some new world overnight. We certainly do not assume that we jump from the current membership to a WTO world overnight. That is the extent to which we have tried to—

Chair: Sorry, an extension and an implementation period are two different things.

Dr Carney: They are different things.

Chair: They might still both lead to uncertainty.

Dr Carney: There is a big difference between an extension, even a long extension, of article 50 and an agreement, yes, with a transition to a known end state. To read into the record what I think is obvious, at least in my long-held view, wherever we are headed it would serve the economy well to have a transition period to that new world, so that people knew soon where they were headed, businesses could reorganise their affairs and get ready for this new world, and Government could finish their various logistical tasks.

Q374 **Rushanara Ali:** Just quickly on that, and then I will bring in Sir David, if it is desirable to have a transition agreement, given we are so close to a no-deal scenario, and you have had a discussion about the prospect of further extension for further negotiation, and so on, is it not sensible to have some kind of extension in order to have the transition deal, rather than no deal?

Dr Carney: There are two things. First, for the record, I do not think I said this, but we did not have a discussion about extension or not of article 50. We had a discussion about what was most likely at the time we were making the forecast. Was it more likely that we would have no deal, no transition, or was it still more likely we would have some form of deal and some form of transition to it? In the judgment of the committee, which I absolutely agreed with, the latter was more likely. Therefore, we kept the same conditioning assumptions.

Given the nature of negotiations to that point, and given to some extent the nature of the political declaration that has been agreed, which has a fairly wide range of potential outcomes associated with it—the Prime Minister has specified one—it seemed a reasonable possibility, at the time we were making the forecast, that uncertainty about the end state would persist beyond the Brexit date.

Q375 **Rushanara Ali:** How far beyond?

Dr Carney: I almost throw it back to you, collectively, because it is in your hands. I am not trying to dodge the question, because that really is the issue.

I will reinforce one point, given everything we have seen in terms of preparedness of businesses and of the country.

Rushanara Ali: I will come on to that.

Dr Carney: This does not hold for the financial sector, which is pretty much ready, but the rest of the economy taken as a whole is not. That is not their fault, but they’re not. Whatever endpoint is decided, ultimately by Parliament, in agreement with the EU 27, it is in their interests that there is a transition to that endpoint.

Q376 **Rushanara Ali:** Time is running out, and we are nowhere near there, unless something changes today or in the next couple of weeks. Sir Dave, do you want to come in?

Sir Dave Ramsden: I was going to bring it back to the way we have approached this, which reflects what we are seeing in terms of the impact on the economy. We have seen this intensifying, multidimensional uncertainty about the end-state, whether there will be a deal or no deal, and a transition. Business investment in the year to Q4 last year fell 3.7%. That is incredibly unusual at a time when the economy has been growing. It is out of line with UK historic experience and what has been happening to our main economic partners.

In a sense, because we are seeing that uncertainty impacting on the economy, our assumption for the forecast is that that will continue and some of it will be locked in for at least another year. That is what frames why we have weaker growth than we had in November in the short term. It is still positive growth, but it is weaker growth. As the uncertainty starts to subside, the fog starts to clear, and the world economy stabilises, we see growth picking up. That is all conditional on this underlying assumption that there will be a transition to a range of Brexit outcomes.

Q377 **Rushanara Ali:** You are saying one year in those sorts of scenarios but, if there is not a transition, how long could we expect uncertainty to persist?

Sir Dave Ramsden: I would then play it back, as the Governor did.

Rushanara Ali: I was hoping for a departure.

Sir Dave Ramsden: It depends on the circumstances we are in. We are seeing in real-time, our lived experience, how an economy deals with multidimensional uncertainty, and we would keep having to observe it if it continued.

Q378 **Rushanara Ali:** Professor Haskel, do you want to quickly come back to that, because I have a couple more questions?

Professor Haskel: Can I be very, very quick? I would amplify Sir Dave's point. In a sense, what we think as a committee is hopefully rather important, but what is possibly even more important is how businesses themselves see all of this and the probabilities of no deal. As someone relatively new to the Bank, I have been very impressed by the innovative way in which the Bank has used its network of agents to try to get at what businesses are actually doing and the preparations they are making.

Chair: We are going to come to what the businesses are doing.

Q379 **Rushanara Ali:** I have one more, and I know others will come in on this. On the agents' survey reports, half of them have said they are not ready, as you have already touched on, for no deal, no transition, even though three-quarters of those firms have contingency plans. There are also issues about many of them starting to stockpile. In the absence of my colleague John Mann, are there enough warehouses to stockpile goods in order to cope with a no-deal, no-transition scenario?

Dr Carney: No, there are not.

Rushanara Ali: There are not.

Dr Carney: No. That is one of the issues, shortage of warehouse space. What we are seeing and picking up is exactly what you have said. We are picking up stockpiling. Some other surveys are picking up stockpiling. To be clear, it is not showing up in the hard data, yet. There is a limit, not just in warehousing capacity, but in how much you can stockpile inputs in order to keep production going. In lean manufacturing, auto sector, aerospace, et cetera, it is not much of a panacea.

Q380 **Rushanara Ali:** We are looking at chaos, basically, in that scenario.

Dr Carney: I will not use that term. A no-deal, no-transition scenario would be an economic shock. It is difficult to be precise about the orders of magnitude of that. It is not a formal forecast; it is only a scenario, but for the purposes of the request of the TSC we provided a forecast of a smooth transition to a WTO scenario, which involves a period of negative growth. I would draw attention to page 17 of the report—you have obviously read it already—with the agents' surveys on what companies expect in that scenario, which is a sharp fall in output, a sharp fall in employment, a sharp fall in exports, unsurprisingly, and a sharp increase in prices.

Q381 **Rushanara Ali:** To quote from one press report, "The risk of border gridlock caused by no-deal Brexit has led British manufacturers to ramp up their stockpiling efforts to the highest levels on record for a major advanced economy". In your view, there is not really anything comparable, is there?

Dr Carney: I have not seen that report. I would be slightly sceptical of that, given that the level of inventory stocks over decades has been coming down. It depends when your history starts. We are picking it up. We think there is increased stockpiling. For the reasons you cited in terms of warehouse space and the overall effectiveness of the strategy, if you are truly a lean manufacturer, you are getting a few extra days, but if your perspective is that the logistical disruptions, border and other, may persist for weeks or even months, it is cold comfort.

Q382 **Catherine McKinnell:** As you mentioned in response to Rushanara, Sir Dave, the latest data on business investment shows it has been stagnant overall since 2016. The recent ONS figures suggest it has fallen in every quarter of 2018 and by 3.7% annually in quarter 4, which is the largest fall we have seen since 2010. Have you seen anything to indicate that that data might be wrong?

Sir Dave Ramsden: When talking about business investment statistics, one always has to bear in mind that they have a record of being revised. The vintages of business investment data through last year have told a different story at different times, so we always have to allow for the chance that the figures will be revised. However, the profile we have ended up with is business investment falling through every quarter of last year, and our expectation is that, in the very short term, that will continue, as uncertainty stays heightened. That fits, for us, with what we have observed from our agents' surveys.

The three of us who did the reports to you have been out to many regions and many nations in the country. Talking to a lot of businesses, you get a sense that, despite underlying conditions for business investment being supportive, cost of capital being low, rates of return being high—and, certainly at the beginning of last year, the world economy was doing well—if you can wait to make a strategic investment, you will, because you want to know the outcome of the Brexit negotiations.

This time last year, when I was talking to businesspeople, they wanted to know what the end state was going to be. Now it is much more short term, and that is why uncertainty has intensified. They want to know whether there is going to be a transition, or whether we are facing no deal, no transition. The option value for waiting now is very, very high. Some replacement investment and that kind of thing will be taking place. That is why business investment is not falling further. It goes back to what I said earlier: look at what has, until recently, been happening in other advanced economies. They have been taking advantage of those supportive conditions for business investment. We have been the outlier. The obvious proximate cause for that is Brexit.

Professor Haskel: You asked directly whether there is any evidence that the business investment figures are wrong. We have done a bit of digging on that, so could I add a little colour? As Sir Dave was saying, it is true that there are quite big revisions to business investment. It is a very difficult thing to measure. But those revisions have got much less in the last few years, as the ONS has improved the way that it has measured business investment.

Secondly, very quickly, quite a lot of the fall in business investment is in transport equipment. There are some slightly peculiar things going on with Monarch going out of business, and therefore changes in aircraft investment. Nonetheless, as Sir Dave says, there is an underlying slowdown in the investment in plant, machinery, equipment and buildings, both relative to the period before and relative to our competitors.

Q383 **Catherine McKinnell:** I was going to ask about that. As you mentioned specifically, Professor Haskell, the assessments are based on a whole range of factors, but particularly on speaking to different regions and regional agents for the Bank. Have you seen a specific impact on particular sectors or regions, or has this been assessed across the board?

Sir Dave Ramsden: I have not seen a regional breakdown of the agents survey on this, so I would have to check.

Q384 **Catherine McKinnell:** Are there parts of the country that are being impacted more profoundly by the lack of confidence to invest than others?

Sir Dave Ramsden: It comes back to the sectoral balance of each region. I went to visit the north-east last autumn, and talked to Nissan and other people about their investment intentions, their stock-building capacities and their warehousing or lack of it. For me, it is more that kind of observation. I then try to line it up with what I get from the ONS macro data.

Dr Carney: The manufacturing sector in the north-east, Midlands and north Wales is where you would expect it. It is not just headline, but it is representative of what is happening in the auto sector.

Q385 **Catherine McKinnell:** The reason I ask is that the concern is not just what the impact has been since 2016, but what the long-term potential impact of the lag from that will be, and the potential outlook for the future for investment. Presumably, there are different parts and different regions that will be affected differently as well.

Dr Carney: Yes. There is one illustration of this on chart 2.3, which you have probably seen. It looks at investment relative to previous recoveries, where it is down slightly. It is about 20 percentage points below the historic range and below our pre-referendum forecast. It is going to be tough to make that up, but we do expect to flip it around. It is part and parcel of this forecast, which, again, is a forecast where there is an agreement and there is a transition to that agreement, that investment growth picks up quite smartly by the end of this year into 2020 and beyond into 2021. The conditions are there, and corporate balance sheets are in pretty good shape, assuming greater clarity about market access and material market access to major trade partners.

Q386 **Catherine McKinnell:** I was going to come back on that in particular, because some might suggest, although I personally would not, that if we go ahead and have a no-deal Brexit on 29 March it will at least bring some certainty to all of that. We then know what our future relationship is and we can get on with the process of making that recovery that you have identified. What is your position on that?

Dr Vlieghe: That is completely wrong as reasoning. The reason firms are holding back investment now, are nervous and want things to be clarified is that they are very worried about the risk of a no-deal, no-transition Brexit and the disruption that that will bring for some parts of the economy, not for all parts of the economy. If you then say to them, "Let's make the disruption happen", how could that possibly be a good thing? That just does not make any sense at all.

The only way to reassure them is to say exactly what the Governor has been saying in this meeting and has been saying for years: whatever change you are going to make, tell people what the change is going to be; then give them several years to prepare for that. Do not change the framework on them overnight. I do not accept that.

I wanted to make another point about the disparities across different parts of the country. The reason you can find some businesses saying it is going to be a disaster and some businesses saying it is going to be fine is that the effects are very unevenly spread, not so much across regions, but across types of business.

You can easily think of a type of business that will be very little affected. If you have a specialised UK manufacturer that buys a relatively simple raw material, some basic chemicals or some steel, and turns it into a very high-value-added product that it sells all over the world, Brexit is not really a problem for it. If you have a company that is part of a major integrated automotive supply chain, Brexit is existential for it.

It is no wonder that different people have very different reactions to how they think it is going to be for them. It is not because some are wrong and some are right. It is because the consequences are incredibly unevenly distributed across different businesses.

Q387 **Catherine McKinnell:** Coming back to the idea of ending the uncertainty and that being a good thing in itself, there is a suggestion that there would be a deal dividend from arriving at a deal. When my colleague Mr Hosie asked you, Governor, you said, "There is more downside in terms of a no-deal Brexit than there is further upside from this forecast in terms of investment", in terms of arriving at a deal. Is that still a position that you hold? You may be aware that the Committee agreed on a cross-party basis that it is not credible to suggest that there will be a deal dividend from a deal being arrived at.

Dr Carney: Maybe I can start on that, since you are quoting me. When we talk about deal dividends, we have to be very careful: compared to what? Our forecast has a deal in it, so it has this recovery in investment. If I am asked by how much more our forecast could improve if there were a deal that was the average of the deals, and there was a smooth transition, the answer is that, if the rest of our forecast is right, it would not make any difference, because we already have that as the core assumption of our forecast. It has to be a better deal than is assumed in our forecast, if you follow me.

If we are talking about a deal dividend relative to no deal, yes, our forecast is better than no deal, quite materially, in our view. We have not put a precise number on that. We have given a scenario for the purposes of the TSC submission, but it would be better by clear orders of magnitude. The last version of the deal dividend is relative to if we had remained in the European Union. The best we can do with that is to look at the forecast that we had in May 2016, which assumed that we remained in the European Union.

You will recall from the submission to the TSC that all the scenarios, not forecasts, that we submitted, including quite close partnerships, lay below the path that we had prior to the referendum. We will never know the answer to that, because it is counterfactual. That was a forecast and this is relative to that forecast. We are tracking 1.5% below that already and potentially talking about downside risk to that.

Q388 **Catherine McKinnell:** The point I am making is that the idea that we are going to recover the lost investment we have seen since 2016 cannot be described as a deal dividend. Any uptick in investment is as a result of—

Dr Carney: It appears to be quite a loaded term, so I should be careful here. We are sitting here right now and we do not have a deal yet, or we do not have a deal that commands a majority in the House and is agreed with the EU 27, so relative to no deal there is a deal dividend. That is our forecast. If we come back in May, if there is no deal and no transition, I guarantee you the path of GDP in our forecast will be materially lower than it is in this February forecast, which assumes that there is a deal and a smooth transition. By the way, that is absolutely the view of businesses up and down this country.

Chair: There are many ifs in this world, but there is no if about coming back before the Treasury Select Committee.

Q389 **Colin Clark:** Good morning, gentlemen. Your latest forecast downgrades global GDP growth, but has it settling at its potential rate. However, financial market indications of the risk of a global recession are rising. Do you think such fears are overblown or a significant risk? I am referencing the Bank of America's recent survey.

Dr Carney: It is a hugely important issue and very topical. The bottom line is that our forecast, as you know, Mr Clark, is that the global economy settles around its trend, somewhere between 3.25% and 3.4%

per annum, by the end of this year and then proceeds roughly around that in subsequent years.

I will give you my personal opinion; colleagues can jump in. I think that is right. I will not go through all the arguments, but part of the speech that Mr Elphicke referenced was looking at exactly this issue. The basic view I have is that there are not major imbalances of a conventional sort in the global economy that would tip it into recession, by which I mean that inflation is under control and there are relatively few signs of overheating in financial markets. There are pockets of risk and we have talked about them in the past, including leveraged lending. Again, in aggregate, I think those imbalances are not, at this point, in a position that would cause a recession.

I would make an exception for China, which is a hugely important economy. There is a series of major imbalances there. Chinese authorities are working to address those, but the risks there are relatively high. That would have a material impact on the global economy and could be what triggers stagnation, but it is not the most likely scenario. Lastly, as per the exchange with Mr Elphicke, the issues around trade are significant and resolution of the current trade disputes, particularly between the US and China but also between the US and the EU, is important. That is the big picture.

Our forecast does not have a global recession. I agree with that for the reasons I have outlined and detailed more in this speech. The last point I would make is that one thing that has happened in the last several months is that the stance, and market expectations for the stance, of monetary policy of the world's major central banks has shifted quite materially and, partly as a consequence, in the last few weeks those market-implied probabilities of a global recession have started to come down again.

Sir Dave Ramsden: To reinforce what the Governor has just said, we have seen market expectations of monetary policy come down. We have seen, therefore, some recovery, for example some narrowing of credit spreads. We had seen a big rise in corporate credit spreads before Christmas, and in the early part of this year they have come back a bit. There are other signs of encouragement in some equity markets. I very much associate myself with the Governor. We have revised down the level of global GDP quite materially in this forecast, by about 0.5% by the end of the forecast. That is quite a big revision between two forecasts, but we have said the risks are now balanced. China is clearly a downside risk, so that is where the trade tensions with the US go. We have had some news on that since we completed the forecasts.

Q390 **Colin Clark:** How exposed is the UK economy in that scenario?

Sir Dave Ramsden: Directly, we are not that exposed, but we are exposed through the wider confidence impacts of trade on the world economy. Also, we are exposed through countries, like Germany, that are much more exposed to China. We were talking earlier about industrial sectoral structure. Germany does a lot of exports with China. The German Ifo index, its equivalent of our CBI index, has been really quite weak recently. That is what has brought euro area growth now down to 0.2%, whereas in 2017 it was averaging 0.7%. We are seeing a really marked slowdown in euro area growth, because particularly Germany is more exposed to China. We are exposed a bit directly, indirectly through Germany and then through those wider confidence effects, which is why it is very important that we keep monitoring the environment of trade tensions.

Colin Clark: Before we move on, Dr Vlieghe, do you want to make a contribution?

Dr Vlieghe: Very briefly, I was going to make the point that, a little over a year ago, financial conditions were incredibly loose and the global economy was growing very strongly. Since then, the global economy has slowed and financial conditions have tightened somewhat, so clearly the risk of a recession is higher now than it was a year ago, but I would completely associate myself with the Governor. From here, my central expectation is not that it keeps deteriorating and we go into a recession. From here, my expectation is that it stabilises and improves a little, precisely because there has been an adjustment in either monetary policy or expectations of monetary policy, which should give some buffer. It is reasonable to say that, compared to a year ago, the risk is more elevated than it was then, but it is still not the baseline scenario.

Q391 **Colin Clark:** Governor, could I bring you back to your speech just recently, which has made you the greatest proponent of international Brexit? I am delighted to see a turnaround. I would like you to expand on what you said.

Dr Carney: It is entirely consistent with previous views.

Q392 **Colin Clark:** It is poetic licence, Governor. "Brexit can lead to a new form of international co-operation and cross-border commerce". In light of the US-Chinese tariff conflict, can you expand on what you meant by that? What does Brexit set out that would improve where we are?

Dr Carney: I was trying to make a couple of points in that paragraph and the speech as a whole. First, as Dr Vlieghe indicated a bit earlier, we have these issues around trade, which are one of the downside risks for the global economy. The question is this: are agreements going to be struck? Is an agreement going to be struck between the US and China? The most recent tweets and news are more positive. The question is whether it is short term or a more structural new trading framework between those two countries.

Is an agreement going to be struck between the UK and the EU 27? On one level, the signal that comes out of the next few weeks will be very important; not just for the UK, but for the global system. Are we moving to a sharper period of de-integration, or is a form of integration possible and, if so, what form does that integration and new trading relationship take? There is a short-term conjunctural, if I can use that technical term, issue with Brexit, which is highly relevant for the UK and very relevant for the EU, but also relevant for the global trading system and, therefore, the global economy. Then there is a medium to long-term issue, which is the form that that agreement takes. In various areas, particularly in financial services, staying where we have a direct interest, can it take the form that is more outcome based?

Colin Clark: That was my next question.

Dr Carney: That is a core issue. If I can make it into a more general point, the Bank has done a lot of work on this to look at the trade imbalances of the major economies, particularly the United States. It is our view—and it is not just an opinion; it is backed up by the analysis—that the US cannot materially reduce its trade deficit by just getting greater market access on the goods side. In fact, if the barriers to services trade that US companies face were to be reduced to the same extent that barriers on goods trade have been reduced in recent decades, they would cut their excess deficit in half. The same happens to hold for the UK as well.

In many respects, if we take a longer-term perspective—Professor Haskel is one of the leading authorities on this—the economy is dematerialising and becoming more intangible based. It is more services based and trade, if it is going to continue to grow, is going to be more around services. In my opinion, it is not realistic that the whole world is going to have the same rules around services. The approach that has begun in financial services, focused on getting the same outcomes once you have achieved certain minimum standards in whatever the service is, with some form of supervisory or regulatory co-operation and information sharing, has the building blocks for freer trade with services. Yesterday's announcement on financial services derivatives with the CFTC is an example of this.

In that respect, how particularly the services side of Brexit is treated is hugely important for the United Kingdom, because it is the biggest part of our economy and fast growing, but potentially points the way, and this sounds slightly grand, to a new form of globalisation and a new form of global trade.

Q393 **Colin Clark:** That is what I am trying to get at. With outcome-based equivalence and Brexit, the tide is going in the same direction. The whole negotiation at the moment is binding us into rules, and Professor Haskel could come on to this, whereas the right direction is that we have equivalence, rather than giving up sovereignty and having rules that bind us in.

Professor Haskel: That may be important. The other element in services trade is that a lot of these intangible types of trades and intangible types of goods are instantiated in people. Therefore, free movement of people is a key element in getting to the type of the future of services trade that the Governor is talking about. To the extent that that comes into the Brexit negotiations, that is an element of it as well, I would say.

Q394 **Colin Clark:** I have used up all my time. Can I quickly move on? The Federal Reserve recently performed a U-turn on planned rate rises, as I think the Governor just mentioned, effectively loosening monetary policy.

Were you surprised to see the Fed change course so sharply, given it is looking at the same global trends? If I can surmise, does the Bank look at more domestic capacity issues compared to the Fed taking a more global view? You are all looking at the same statistics, but your monetary policy is more about domestic capacity than it is about the global issues.

Dr Carney: The UK is one of the most open economies in the world and is certainly substantially more open than the US economy.

Colin Clark: So global trends are more important.

Dr Carney: They are more important. We spend much more time on these issues, as you would expect. It is natural. I am not criticising the Fed. It is natural that it balances its time in that way.

I have one last point. One of the challenges, though, is that, as the global economy evolves, the weight of emerging economies is going up quite substantially, but global interest rates, global currency markets and transactions are still dominated by the dollar. Basically, the dollar's dominance has not changed since the breakup of the Bretton Woods system, and yet emerging economies have gone from at that time less than a third of the global economy to almost two-thirds of the global economy, in terms of activity. That means there is an increased tension.

Both of us have referenced this in different ways in the last few weeks. There is an increased tension if the US economy is out of sync with global trends. In the case of the US, in part because of pro-cyclical fiscal policy, the Fed was raising rates certainly at a faster pace than other central banks would have been raising rates. It has to make a judgment, which is difficult to make, on what that will do to global financial conditions, what it will do to global activity and, therefore, how it will spill back on the US. One of the things we saw, with the wisdom of hindsight, in 2018, is that the global economy slowed a little more perhaps than some might have expected, given the path of US policy.

Q395 **Stewart Hosie:** Governor, the *Inflation Report* highlighted a decline in the GfK consumer confidence index and in retail sales at the end of last year as a sign that households may be responding to uncertainty over Brexit, but both indices rebounded in January. What is the balance of evidence? Are households retrenching spending in advance of Brexit or is there evidence that they are in some way stockpiling or buying in advance of Brexit? If the latter is the case, would it be evidenced by the increase in spending in that index at the start of this year?

Dr Carney: I have a couple of comments. First, in terms of the consumer confidence indices and the GfK in particular, there is quite a marked divergence in households' views of their own financial circumstances and employment prospects, and the general economic circumstance. It seems, and there is a fair bit of evidence, that that dichotomy is being manifested in fewer big ticket purchases. The housing market is not that active at present, in terms of numbers of transactions, and price growth is very low. Auto sales and other consumer durables have been relatively weak. Overall, consumption growth has held up relatively well, consistent with the return to real income growth and the fact that wages have picked up.

I have two other quick comments for context. First, the January retail sales were strong. They were quite a bit stronger than the market, but only a bit stronger than what our expectations had been. It is good to see, and we thought that the consumer would remain relatively resilient, so that is confirmation. I should caveat that. Retail sales are about 40% of overall consumption, so it is something, but it is not everything and it is only one month of data. Lastly, you asked specifically about stockpiling and at this stage we are not picking up evidence of household stockpiling in any material sense.

Q396 **Stewart Hosie:** Savings rates have also fallen sharply since 2016. Do you think that households will be comfortable with this level of saving in the long term, or will there eventually have to be either a slowdown in spending growth or a demand for more substantial real terms increases in income?

Dr Carney: There are a few ways to answer that. I will give some overall economic context. Post-referendum, if we look at three sets of reactions to the referendum and what they implied about future prospects, financial markets marked down future prospects. The view was that incomes in the UK relative to other countries would be lower as a consequence of the referendum. We saw that immediately with sterling. As you know, sterling is about 15% lower than it was prior to the referendum being called, with a big drop post-referendum. It has more or less stayed there.

There has been quite substantial underperformance of UK-focused equities. There are lots of other examples of that. Financial markets are forward looking and take a view. It does not mean it is necessarily right, but that is the collective view of financial markets and those prospects have been consistently marked down. Business has to some extent done that, but it is probably more driven by what we have been talking about this morning, uncertainty, as opposed a definitive view of where those prospects are. That would be the sum of the evidence. If we had to choose one or the other, I would opt for uncertainty.

Households have been on the other extreme. Their collective behaviour has not been consistent with a reduction of future income. They drew down savings initially as real incomes fell, and then they have only recently had this behaviour where there has been some caution around bigger ticket purchases, housing being the most obvious example. The judgment that has been made implicitly there is that income growth will be consistent with current levels, and that depends. It depends on the form of deal that is ultimately agreed.

To bring it back to monetary policy, there will be a reconciliation in terms of these different views. Let us say that there is a relatively close partnership. As a consequence of that, the exchange rate appreciates, because financial markets mark up. They overreacted, so they mark up future prospects. Businesses invest. Households are validated in terms of their expectations of future income prospects. I can paint the reverse picture as well.

Q397 **Stewart Hosie:** On expectations, a poll published by PwC reported that most consumers had not adjusted and would not adjust their spending plans in response to Brexit, but that sentiment was generally stronger in areas that voted leave in 2016. Do you think that there persists a gap in expectations about Brexit between households and economic forecasters, and that this could lead you or others to be overly pessimistic about the growth impact, or is it simply that for some people the potential downsides of Brexit have not hit home yet?

Dr Carney: It remains to be seen. We do not know what form Brexit is going to take and how long it will take to get there. One has to be careful about making that judgment. I would withhold making that judgment at this stage, because we do not know. We do not know where this is going. Households have exhibited behaviour that is consistent with what they are seeing on the ground, which is a strong job market. They worked their way through quite a severe real income squeeze and now wage growth is outpacing inflation. They are, in the short term, responsibly consuming. They are not drawing down on savings. They have improved their balance sheets and they are consuming out of that growth.

Depending on the reality of the form that Brexit takes, we could have a continuation of that job market and a further firming of wages, which is what our forecast is. Wage growth gets to 3.75% in the forecast by the end and there is quite significant real income growth. We could, though, have something more akin to what businesses that we survey expect in a no-deal scenario, which is a sharp increase in unemployment, a drop in output and a sharp increase in prices.

Dr Vlieghe: I agree with everything the Governor said. I wanted to add one more point. In the way I think about this, as you highlighted, the fact that the savings rate is now much lower and consumption has been sustained, in the face of weaker income growth, initially by lowering the savings rate does not necessarily tell us that the savings rate needs to go back up soon, but it does tell us that there is an asymmetry to the outlook for households.

The idea that the savings rate can drop by a similar amount again in the face of an adverse shock is highly unlikely, whereas the possibility is clearly that, from here, the savings rate goes back to something closer to historical averages. Therefore, it does not help us in predicting what consumption growth is going to be in the next few quarters, but it does tell us that households are unusually vulnerable to a further setback.

Q398 **Stewart Hosie:** Let us pull that a bit further. Given that asymmetry of outlook, is it sustainable for expectation about Brexit within and between households, businesses and financial markets to be so divergent? In particular, if households, some of them particularly in leave areas, remain bullish will there be a build-up of inflationary pressure and could that be sufficient to force a monetary policy response?

Dr Vlieghe: Over what sort of horizon period?

Q399 **Stewart Hosie:** If they continue to spend and their demands and expectations are that it will be good, over a quarter, over two quarters or perhaps over three quarters.

Dr Vlieghe: The scenario you describe is precisely what has been happening over the last couple of years. Despite the fact that businesses were relatively pessimistic and cut back their investment at an increasing rate, households have continued to spend, and the net effect of this is that monetary policy has been on a very gradual tightening path. That has already happened. If we have something like that continuing, where the economy grows slightly above trend because it is supported by household consumption, that will be a scenario where rates are likely to continue to go up at a gradual and limited pace.

Sir Dave Ramsden: I was just going to reinforce what Jan was saying. Since the referendum, a number of us have drawn attention to the fact that we have seen consumption hold up on the back of a strong jobs market, but we have seen this weakness in investment. With a flexible labour market, companies are able to carry on employing people and, indeed, hiring people, but are cutting back on investment. We have seen, in the very latest business surveys, some softening in employment intentions, not in all of them, but the latest PMI surveys were weaker on employment expectations. Yesterday's CBI services survey was quite weak on employment.

As Jan says, whether the environment we have been in continues or whether, as we get more clarity on Brexit, we see a change in behaviour of businesses in terms of their hiring, that will then play back, because whether you are in a job or not tends to be the key driver of your behaviour as a consumer and as a household.

Q400 **Stewart Hosie:** I have a final question. To digress slightly, if that pattern was to be maintained for some years—that is to say, high levels of employment but reduced business investment—that, traditionally, would lead to a productivity competitive disadvantage against those countries that invest in capital equipment, would it not? Is that not the logical conclusion for that pattern, if it was maintained for some time?

Sir Dave Ramsden: It depends. It has been part of the explanation for why we have had a weak productivity performance, and not just since the referendum. You can go back many years. Say the people being employed were highly skilled, for example. It comes back to what Jonathan was saying earlier: with a lot of services, the modern economy is bound up in human capital, in people. It would depend, but it would certainly be a risk.

Q401 **Mr Clarke:** Sir Dave, my questions are on the employment situation. Despite the fact that there has been some weakening over the last few months, employment growth has remained pretty robust over the last several quarters. In quarter 4, it was 167,000 net up. Why do you think it has been so resilient, given the inevitable uncertainty about our Brexit relationship with the EU?

Sir Dave Ramsden: To some extent, it is the flipside of companies holding off on investment. We are still seeing growth in the economy. We have an incredibly flexible labour market in this economy. If you are an employer, you can hire someone, you can take them on and then you can see whether that demand is fulfilled and whether they are sustained in that employment. This has been a really important aspect of the UK economy's resilience since the referendum. Employment has really held up.

What we are now seeing, as the Governor and others have drawn attention to, and what has been a striking feature for me, is how the tightening of the labour market is also leading to a pickup in wage growth. That now seems well established at above 3%. The latest number is about 3.4%, and we are forecasting that that rises to 3.75%. This is not a recent development. If you look back over 20 or 30 years in the UK labour market, after each recession unemployment has peaked lower than after the previous one.

What is interesting, after the referendum, is whether we saw what we saw after the financial crisis, in that people in jobs start to move less, because, in a version of the Governor's caution, they get nervous about the outlook. In the latest agents' survey, we have picked up a sense of employees being a bit more reluctant to change jobs. That dynamism of the labour market could slow down a bit, but it has been robust up to now.

Q402 **Mr Clarke:** As a point arising out of that, the UK's structural unemployment rate is effectively falling after each successive recession. Is that in line with the performance of other western economies, or are we an outlier in that regard?

Sir Dave Ramsden: Generally, advanced economies are developing a range of policies that mean the labour market operates more efficiently and, when there is a shock, the impact of that shock is more short lived. We have moved a long way from the 1980s, when we had a big industrial recession in the UK. Structural unemployment went up and took ages to come back down. Many regions with a strong industrial base never recovered or took a lot longer to recover. We now have much more of a labour market where jobs are created and people can reskill and retrain.

The UK's equilibrium unemployment rate is down now to, we think, 4.25%. That is pretty low. Our labour market immediately after the financial crisis responded a bit better than the US's, which is typically seen as a very flexible labour market. There was some loss of participation there. We certainly have lower structural unemployment than the average in the euro area, but then a country like Germany is close to us with its level of equilibrium unemployment.

Q403 **Mr Clarke:** Does anyone have any further comments on that point before I move on?

Professor Haskel: To echo what Sir Dave was saying, in many ways the unemployment story is quite a success story for policymakers, who have been innovative, imaginative and, if I may say, have listened to some economics research in developing these types of policies. As a particular example on long-term unemployment, which I know Dave was involved with when he was at the Treasury, the attitude towards supporting the long-term unemployed and making sure there is not an enormous build-up of long-term unemployed people has completely changed, and that has been a big success.

Q404 **Mr Clarke:** That is a heartening note amid a great deal of woe. Governor, on the point that Sir Dave raised about the fact that we are now witnessing what would appear to be a more normative situation, whereby as the labour market tightens wage growth finally is sparking into life, are you confident that that relationship, which we have so long expected or hoped would reassert itself, has indeed re-established itself or is something else happening?

Dr Carney: No, the labour market and wage growth have performed consistent with our expectations and the expectation we have held, certainly, over the last 18 to 24 months. We had expected this firming of wages. It is a significant development. The Phillips curve is alive and well. Sorry to be economic about it, but—

Mr Clarke: No, you are allowed to be. This is the Treasury Select Committee.

Dr Carney: Arguably, some of the reforms over the course of the last several years, plus some broader demographic factors, for example higher female participation, plus, I would suggest—this was certainly striking five and a half years ago when I first came here—the overhang of debt and the reduction of pension pots of a number of people, which meant that they were staying in work longer, contributed to higher participation in the labour market and a lower structural level of unemployment in this economy. The Phillips curve shifted down.

Now that you get to somewhere around the equilibrium, you see wage growth broadly consistent, moving from 1% wage growth on average about five years ago to the twos a couple of years ago, to the high twos to 3.5 range now. Really, the only reason it is not at the pre-crisis levels of 4.25% and 4.5% is that productivity growth is still relatively weak. It is consistent with a tight labour market and the level of productivity growth we have now.

I will hand back, but to link back to Mr Hosie's question earlier, which is about the consequences if we have this long period of underinvestment, ultimately that feeds back to wages, because it caps the extent to which, even in a tight labour market, wages can grow because, ultimately, productivity pays for that.

Q405 **Mr Clarke:** That is exactly the point I wanted to raise. You are forecasting that productivity now will not exceed 1% right through to 2021. That, you are saying, is itself a structural bar on the level at which wage growth can be sustainable.

Dr Carney: In the medium term and, certainly, long term it is. Let us be clear. One of the toughest things to forecast in the short-term is productivity. Consistent with that, we do not have a very good track record of forecasting productivity growth, so there is an element of waiting to see.

There are a couple of reasons to lower the productivity forecast. One of them is what we have been talking about, lower investment. That is part of the cost. Secondly, we just have not seen that pickup in productivity and we are waiting to see it firm. I will not go back into the uncertainty discussion, but greater certainty would be helpful. All things being equal, in a tighter labour market, with wages starting to pick up, as a business, you start thinking of adding capital to labour. The relativities move in the favour of capital, and that should support productivity, but we are not going to try to make a precise call on it. We will wait to see until it starts to fill in.

Q406 **Mr Clarke:** Thank you very much. I am not an advocate of a no-deal Brexit, but I am not one of those who believe it can be ruled out in certain scenarios. Further to that and the impact that a no-deal exit might have, which by common accord would lead to a depreciation in sterling, there is a table on page 41 of the *Inflation Report* that caught my eye, showing that GDP growth in each of the next three years is higher under a depreciation than an appreciation scenario. I just wanted to get your thoughts on that. It would be quite markedly higher next year, 0.6% higher. It is just trying to understand.

Dr Carney: You are trying to understand. Could I help you with that?

Mr Clarke: I am trying to tease this out. Is this not a slight counterweight to the more catastrophic forecasts of what no deal would look like?

Dr Carney: Certainly, the role of a flexible exchange rate is to act as a shock absorber for a variety of shocks, and a no-deal, no-transition Brexit would be a shock. It would be a negative shock. The key thing on that table is "holding everything else, including monetary policy, constant", which means holding constant the form of trading relationship we have. Maybe we should have underlined "everything else". Probably a useful supplement, which is not a forecast but a scenario, would be to cross-reference that with the MPC's scenario for a smooth transition to WTO, which has, from memory, in the range of 8.5% depreciation, so 8% to 10% depreciation of sterling. The consequence of that is a 2.5% decline in the level of GDP relative to, in this case, the November forecast. It is an offset, but it is swamped or overwhelmed by the loss in trade.

Mr Clarke: It seemed worth a try.

Dr Carney: Yes, it seemed worth a try.

Sir Dave Ramsden: It goes back to something Dr Vlieghe was saying earlier. In that world, you would also have an intensification, in some senses, of uncertainty. On the next page, we do the sensitivity analysis of the impact of uncertainty, if you assume a greater degree of uncertainty. There, of course, you get a hit to GDP. We were trying to bring out there the sensitivities of those two variables and then, as the Governor has said, in the worked-up scenario work we did for the Committee in the autumn, we put them together.

Dr Carney: If I bring it back to monetary policy very quickly, this is where that sensitivity analysis is useful. Let us say we get clarity about the path and we get a deal. The exchange rate appreciates associated with that and the degree of uncertainty goes down. This will give you some sense of what the relative impacts could be on inflation, because, after all, there is a deal in the forecast. The deal will be undoubtedly somewhat different than the core of that, but it gives a sense of where that works. The appreciation pushes down on inflation; the reduction in uncertainty pushes up on inflation, and we will have to make a balanced judgment on everything for the path of policy.

In the event of greater clarity, a deal or clearer transition, the outlook is going to change, asset prices are going to change, business behaviour is going to change and we are going to need to do a reassessment of the stance of monetary policy.

Mr Clarke: Indeed, and all of that is contingent. Let us hope for a deal.

Q407 **Chair:** I have two final questions following up from that. Dr Vlieghe, earlier on we talked about the market expectations of monetary policy. We have talked a lot this morning about loosening in the event of no deal or other things, but this would be the other way: what would it take for the committee to have to decide that interest rates should go up? In your speech, you talked about a path for Bank Rate potentially involving a hike of around one quarter point per year as a reasonable central case. You said households continuing to spend could be one of the factors that might make a decision about interest rates going up more likely. Are there any other factors that you would particularly be looking at?

Dr Vlieghe: That forecast of about a quarter point per year is conditioned on several things. It is conditioned on the global economy not getting any worse than it is now, stabilising or maybe improving a little. It is conditional on the very sharp slowdown in the UK economy that we have seen in the last quarter of last year and probably in the first quarter of this year being temporary. As the year progresses, we expect to see a pickup in line with these conditioning assumptions of a smooth transition.

It is also conditional on seeing a continued tightness in the labour market, which means that the unemployment rate stays low and wage growth around 3.5% is probably high enough. Also, one of the things I highlighted is that, at some point, we would expect to see that in some other measures of domestically generated inflation. We are seeing it in wages. At some point, we expect firms to pass that on. It does not seem to have happened yet, as measured, for example, by services inflation, which remains weak, but my forecast is that, at some point, that does feed through. If all those things come to pass, that is roughly consistent with a rate increase of that order of magnitude.

Q408 **Chair:** The other thing is something different about disclosing data from and to the EU. You may perhaps be aware, Dr Carney, that a statutory instrument was passed last week entitled "Disclosure of Information and

Co-operation (Financial Services)". We go for snappy titles in the secondary legislation, as you can see. It places restrictions on how the FCA or the PRA handle confidential information, particularly restricting the ability to disclose confidential information to European supervisory authorities. I do not know how involved you have been in this. It might be something to write to us about rather than to answer. What was the involvement of the Bank in that? There has been much open exchange of information because of the relationship we have with European authorities up until 29 March, one assumes. Are restrictions on the passing of information a concern to the Bank?

Dr Carney: Yes. First, as you can appreciate, as with all this legislation, this is a product of us becoming a third country, as the EU has restrictions, quite appropriately, on provision of information to third countries. The corollary or the consequence of that is the need to strike memoranda of understanding and supervisory co-operation agreements, which include provisions for the sharing of that information. We have made progress on those. We are in a position where we are confident that we will have those in place for Brexit day.

I am happy to write and give a bit more context to the specific agreements that we are working on and why it is relevant. As you can appreciate, what is incredibly important for us is the reciprocity of that, because we are a host to all these major systemic institutions, many of which are European. We have enjoyed that information sharing up until now and we want that to continue. It is only appropriate, subject to the proper safeguards, that the confidential information is protected and used appropriately, and only for the purposes it has, by the recipients in Europe. We want to make sure we can get that information.

We will get there, but why do I not write and provide the context? I will add that, in this case and in the other cases where the SIs were relevant to the Bank, while it is not our decision, we have been consulted by the Treasury.

Q409 **Chair:** Finally, perhaps you might want to cover this in the letter as well. What would the consequences be of those agreements not being reached, and would you consider there to be prudential risk if that data, as you say, cannot be shared on a reciprocal basis?

Dr Carney: Without question, those risks would develop. One of the judgments we took a year and a half ago was to presume that we would eventually get to those agreements and give the signal that we would provide temporary recognition of institutions that have operated here, in many cases, for decades, if not centuries, for a period of time. Yes, we absolutely need to have those in place. The engagement with our European colleagues on these issues has been open, co-operative and productive, so we feel confident that those will be there.

Chair: Very good. Thank you all very much indeed for your time this morning. We will look forward to potentially seeing you on the other side of 29 March, but who knows what might happen in the meantime?

Mr Clarke: We will still be here.

Chair: We will be here. What policy is like by then I do not know. Thank you.