



Treasury Committee

Oral evidence: [Bank of England December 2015
Financial Stability Report](#), HC 780

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Members present: Mr Andrew Tyrie (Chair); Mr Steve Baker, Mark Garnier, Helen Goodman, Stephen Hammond, George Kerevan, John Mann, Chris Philp, Jacob Rees-Mogg, Rachel Reeves, Wes Streeting

Questions 83-197

Witnesses: **Dr Mark Carney**, Governor, **Alex Brazier**, Executive Director, Financial Stability Strategy and Risk, **Dame Clara Furse DBE**, External Member, Financial Policy Committee, and **Martin Taylor**, External Member, Financial Policy Committee, Bank of England, gave evidence.

Q83 Chair: Thank you very much for coming in to give evidence to us today. I have just received a letter from the Chancellor of the Exchequer to tell me that you are losing the head of the PRA to the FCA. He is now going to head that up. I presume that you feel that the FCA's gain is your loss. I think it is the view of the majority of this Committee and certainly the last Committee that he did a very good job creating the PRA from the detritus of what was left of the FSA after its shortcomings were exposed in the crash, and he has now taking on an even bigger challenge at the FCA. There are lots of problems to look at, both on the conduct and the markets side. We will be holding a pre-appointment hearing with him and will be going through those problems and how he intends to address them. I would just like to begin by asking one thing that is not made clear in this letter from the Chancellor—when he takes up his appointment.

Dr Carney: If I may say, Chairman, I deeply admire Andrew Bailey's career, his contribution to the people, his contribution to the Bank of England and his commitment to making the system work. This is yet another testimony to that commitment. I would further underscore, though, that he leaves a tremendous legacy at the PRA, as you rightly noted. He has built the PRA, but he has also built an exceptionally dedicated group of colleagues. We on the FPC will continue to benefit from his insight and counsel because, as you know, as the CEO of the FCA he will be a member of the FPC. In that capacity, he will also remain a member of the PRA board, again as CEO of the FCA.

The intent is that he would take up his post once his successor at the PRA is determined. Obviously the Government will run an open process for that successor. The reasonable expectations to do that properly are something in the three-to-six-month timeframe, so I would give a general indication of by the summer. The key point is that, once his successor is determined, he would be in a position to take up the FCA position. I would also like to record my personal appreciation, Andrew's and I think all of ours, for Tracey McDermott's service at the FCA and her continuing as the interim CEO at the FCA during this period.

Q84 Chair: Probably not less than three months and probably not more than six.

Dr Carney: One would hope not more than the latter, yes.

Q85 Chair: This is a hope, not an expectation. I am just trying to get clarity, so that we understand.

Dr Carney: There is no designated successor. This will be a proper open process.

Q86 Chair: You are advertising.

Dr Carney: The Government will do so, yes.

Chair: The Government will be advertising and it will be an open process.

Dr Carney: With a panel, yes.

Q87 Chair: Who is chairing the panel?

Dr Carney: I do not know the answer to that. It is a question for the Chancellor.

Q88 Chair: There is also your role at the Bank, Governor. You came with a five-year term, at your insistence, even though legislation was just before Parliament to make that a single non-renewable term of eight years, as opposed to two five-year terms with one renewal, which had been the previous legislation in 1997. Can you tell us whether we are going to have you for eight years, Governor? Have you changed your intention?

Dr Carney: Chairman, you have just had me for a little more than two and a half years, as you know. I am certainly not intending to follow Mr Bailey to the FCA. I am confident that he can exert a leadership role there. It is a tremendous honour to have this role. It is an important role. We do have a great group of colleagues and I think we are making progress. There is a lot more to be done, whether in financial stability, monetary stability or the functioning of the Bank. In fairness, I would need to make a determination by the end of the year if I were to request to stay for longer.

Chair: This year?

Dr Carney: Yes.

Q89 Chair: I would like just to point out that when we asked you why you had been so firm about telling us that you wanted to go after five years in your pre-appointment hearing, you told us that you thought it was important to get clarity about this right from the start, even though these events are many years hence—five years out. The sooner you feel able to give us this clarity the better, Governor.

Can I turn to the volatility in the markets? First of all, I will begin with a fairly straightforward question. Do you think that the decision of the Fed to raise interest rates, given recent events, was a prudent one?

Dr Carney: The causes of recent events do not originate in Washington. They originate, in my opinion, in some of the issues that we had identified in the Financial Stability Report. The strains of adjustment to very high build-ups of debt, principally private debt or quasi-private debt in China, but also a broader suite of emerging markets, combined with the repatriation of capital flows or, in the case of China, the increase and acceleration of capital outflows from that country, adding to the tightness of domestic conditions in those countries compounding slowdowns, is the genesis and is at the core of recent moves. There are other factors that are amplifying, some market technicals and some other fundamentals. Alongside that, there is a question being asked about the momentum that remains in the global economy.

If I may, the MPC is in the process of updating its forecast, but our sense is that, at the core of the advanced economies, there is solid growth. As had been identified by the Financial Policy Committee a few reports back, but with increasing intensity, the risks in the global economy were shifting from the advanced to the emerging economies. What we see at present is more a crystallisation of that process and a crystallisation of those risks.

Q90 Chair: Was that a yes or no to the decision taken?

Dr Carney: The Fed is managing monetary policy for what is the most closed of the major economies. While these events are important, in the judgment of the Federal Reserve, domestic inflationary pressures warranted the adjustment in monetary policy. I fully support their move. The focus is shifting to the future track of monetary policy, as it should, for those advanced economies.

Q91 Chair: While it might have been the right decision for the US economy, it might not be the right decision for the world economy. Is that what you mean?

Dr Carney: That is not what I intended to say.

Q92 Chair: The impression was gained when you talked about the most closed economy.

Dr Carney: If I may, the path of monetary policy and the prospect of additional tightening is the question. The market has a fairly different view, as you would be aware, than what is indicated by the dot plots at the Federal Reserve.

Q93 Chair: I just want to be clear. The key point I want to have clarity on is if you think that that interest rate rise has made a contribution to the instability or not.

Dr Carney: It has long been the view of the FPC and myself personally that the start of the tightening of US monetary policy could lead to a tightening of global financial conditions, particularly for emerging economies, and could accelerate weakness. We have seen some of that, so it is a contributory factor to these developments. Their fundamental roots, though, have a much longer genesis.

Chair: It has made a contribution, but it is not the underlying cause.

Dr Carney: That is correct.

Q94 Chair: Can I just turn to your own assessment of risk? We have had quite a bit of volatility recently, but the Financial Stability Report says that we are now no longer in what is described as stage one, but we are now in what is described as stage two of the cycle. Stage one is risks facing the financial system are very subdued in the post-crisis or repair phase. I think that is the phrase. Stage two is that risks in the financial system re-emerge, but they are not elevated. We are now in what is described as a “standard risk environment”. Would you describe the current environment as a standard risk environment, Governor?

Dr Carney: If I may distinguish between two things, first global and UK, and then secondly between risk and resilience, therein lies the answer. In terms of the risk environment in the United Kingdom, which of course is affected by global factors, but the actual risk environment in the United Kingdom, gradually over the last few years, but on a cumulative basis, we see a move from the period you quoted of repair and risk retrenchment, where credit was falling, banks were not looking for business, there was no credit and there was no risk-taking in commercial property, amongst businesses and less so in financial markets, to a more normal risk environment.

That does not mean that extreme risks are being taken. It does not mean excessive credit growth, but it means that there are some risks being taken. In 2015, we saw that aggregate credit growth turned positive. It turned positive for SMEs for the first time. We have seen developments in sub-sectors of the housing market, where greater risk is being taken in buy to let. My colleague, Mr Brazier, gave a speech that detailed developments in commercial real estate and he can expand on that, but it is more consistent with the normal risk environment. All of this is against a backdrop of heightened global risk, particularly in emerging economies.

Those need to be set against the progress that has been made on improving the resilience of the core of the system, and one of the topics for today is of course the stress test we conducted, jointly with the PRA, which demonstrates the improvements to the core. In very short terms, we conducted a stress test, which is more severe in terms of the fundamental shifts and the cumulative follow-on impacts on financial and real asset prices, than what is going on today. The core of the system, our major banks and building societies, is capitalised for that scenario, which helps to ensure that a more normal risk environment can persist in the United Kingdom.

Q95 Chair: Last week, you made a speech in which you obtained headlines saying that interest rates were being put on hold in the UK. Presumably this was part of the instability management process that the Bank has in train. Who did you consult on the MPC or the FPC before making that speech? It is just the names I am interested in really, rather than the general. To what extent was that speech cleared with either of those two committees?

Dr Carney: First off, as a member of the MPC, I would not clear a speech that gives my personal view, nor would any other member of the MPC clear a speech with me.

Q96 Chair: The MPC of course is a consensus-based committee.

Dr Carney: As you know, the MPC has responsibility for the setting of interest rates. The FPC does not. What is important is that the FPC understands the reaction function of the MPC and how we are likely to conduct interest rates.

Q97 Chair: Just before we move off the MPC, let us do one at a time. Absolutely right—we now have clarity that you were speaking as an individual, as you have every right to do. I just want clarity on whether you consulted any other members of the MPC before making that speech. Did they see drafts of it?

Dr Carney: A draft of any speech given by an MPC member is circulated to other members of the MPC, as a courtesy, in advance of the speech being given.

Q98 Chair: Did you discuss this with any other members of the MPC?

Dr Carney: These are my views. To be clear about my views, the speech did not contain the phrase that you used, in terms of being “on hold”.

Q99 Chair: I thought I made that clear in the way I asked it. It was presented as that.

Dr Carney: Sometimes there is some confusion that can be generated by imprecision.

Q100 Chair: Did the *FT* get that wrong with their headline?

Dr Carney: I did not think you were quoting the *FT*.

Chair: I was certainly quoting one of the newspapers.

Dr Carney: My sense of the reporting was that it correctly identified the conditions that would be required, in my opinion, for an interest rate increase to come into play. Those conditions are not yet in place, those conditions being entirely consistent with what I had laid out in the summer.

Q101 Chair: You are not happy with the phrase “on hold”.

Dr Carney: We make discrete decisions about interest rates. We have just made one. We clearly did not raise interest rates. In my opinion, we will have to see the renewal of growth above trend. We will have to see unit labour costs pick up and we will have to see a continued firming of core inflation.

Q102 Chair: This is where the FPC’s work and the MPC’s work often intersect very much, is it not? Perhaps I could ask if you consulted anybody on the FPC about this speech.

Dr Carney: No.

Q103 Chair: They were unaware of it completely.

Dr Carney: The FPC is always unaware of a given speech—maybe there is an exception to that rule—of a member of the MPC. Kristin Forbes is giving a speech today.

Q104 Chair: While speeches are circulated as a courtesy to the MPC, those same speeches do not go to the FPC.

Dr Carney: No, they do not. May I make a point?

Chair: Briefly if you may, because a lot of other colleagues want to come in and I also want to bring in a couple of your colleagues.

Dr Carney: Your line of questioning is around a fundamental issue, which is how the two committees interact and what the appropriate level of understanding is between the two committees. The FPC and the MPC met about a fortnight ago, in early January, to discuss the overall risk environment, because the FPC had made this determination about the overall risk environment, so that the MPC had a sense of what the FPC saw as a more normal risk environment and so that there could be a discussion about what that means for FPC policy and, implicitly, so the MPC can incorporate that into their thinking, in terms of the appropriate stance and monetary policy—I will finish with this—recognising that

monetary policy is viewed in general as the last line of defence against financial stability issues.

Q105 Chair: I am grateful to you for what you have said about the importance of the co-ordination between the committees. Indeed, we took extensive evidence from some very senior people, including former Deputy Governors of the Bank, who held the view that there should be one committee and not two, prior to the creation of the FPC. It is an issue of enduring importance. Can I just ask you, Clara Furse, if there is anything that you would like to add or clarify, particularly anything that you want to perhaps qualify that you have heard from the Governor, or do you agree with everything he has said?

Dame Clara Furse: I agree with what he has said. We do have a lot of interaction with the MPC now. That is very useful. We have four scheduled meetings every year and we had a very useful meeting a couple of weeks ago, which looked at credit developments—credit growth in particular.

Martin Taylor: I would just distinguish between our understanding of how the MPC is thinking and how individual members are thinking—which is quite good; we spend a lot of time with them—and our knowledge of what they are going to do. We do not have that. We might be surprised if they did something that we were not expecting. We do not know what they are going to do, but we do know how they are thinking, if I can put it that way.

Q106 Chair: Have you thought further about the merits of two committees against one, now that you have some inside experience?

Martin Taylor: I have not really. I do not think we are having difficulties operating with two committees.

Chair: That is very helpful guidance from an external.

Martin Taylor: That is the best way to put it.

Q107 George Kerevan: As I understand it, the basic architecture of the new regulatory system, on the fiscal side, begins with a system-wide capital ratio of 11% and also the 1% normal fiscal buffer in normal conditions. Now, that is significantly different from the recommendations from the Vickers inquiry, albeit that was early on, but clearly there has been a degree of further thinking. I wonder if I might begin with Mr Taylor, because he was on the Vickers Commission. Could you read us through the change? Do you feel comfortable with the change and how it has come about?

Martin Taylor: I am very glad you asked the question. It is an extremely important one. You can look at the 11%, which actually is more like 13-13.5% on present calibrations, because the 11% supposes that the banks have no pension deficits, for instance. I do not think we are going to see that for a long time. It is before the change in risk weights that Basel is putting through at the moment.

If you call the 11% 13%, there is still a heck of a gap, as you rightly point out, between 13% and the Vickers Commission's 18%, but the Vickers Commission was operating on the assumption that there would not be bail-in-able debt, if I can put it that way, which we now have or shall shortly have. The rules are in place, but the banks have until 2019, as I understand it, to build up to where they need to be. We are going to have something between 11% and 13%, and that 11% is going to be 12%, because the banks are going to want to keep a buffer above where they are required to be at all times, and as much again in debt that can turn into equity in a crisis. You could say it is 12% plus 12%. If you suppose an exchange rate of one-to-two for pure equity against bail-in-able debt, you actually get to 18%, if you see what I mean.

George Kerevan: It is magic.

Martin Taylor: It is magic. The kind of work that was done to underscore how much capital the system would be safe with has been greatly advanced and developed since Vickers' work, but the fundamental answer is not actually very different.

If you look at what we were looking for under Vickers, we wanted a lot more equity, and the banks have and will have a lot more equity. We wanted bail-in-able debt if we could get it; we were worried about getting international agreement on it. We wanted a gross leverage ratio; we seem to have that. We wanted a ring-fence for the retail banking system; that has gone through Parliament and is being put in place. We wanted a better stress-testing regime and that has come on by leaps and bounds in the PRA. We wanted people to take more responsibility for their actions, and the Senior Managers Regime is now in place. From where I sit, that is six out of six. I am very happy with the settlement.

Dr Carney: I would just supplement that by putting a bit of context around what capital actually is. It started with re-definition of what capital is, which you have to do, both on the liability and on the asset side, as you know. You have to take away assets that will not be there in resolutions such as deferred tax assets. In effect, a series of measures to define better capital and improve risk-weighting measures means that, for our largest banks, the minimum capital requirements have effectively gone up tenfold. It is important to recognise that. It tells you how little actual capital the system could have run with and some institutions did before. That is a supplemental point.

The second thing I would supplement this with is that it is the intention of the FPC to actively use the counter-cyclical buffer, and so that 11%, properly measured—in other words rightly, as Mr Taylor said—is effectively 13.5% at present, under current measurements. We would supplement that by using the counter-cyclical buffer in normal times. We have given broad guidance that, in normal times, one would expect the counter-cyclical buffer to be around 1%. If risk-taking were more advanced, more extreme and more aggressive that would be higher and we would continue to move it up.

Q108 George Kerevan: Forgive me, but it takes a year to click in, when you issue an order, so it is not an instant response.

Dr Carney: You are absolutely right; it is not an instant response. However, what we are looking to do is to be as transparent and clear as possible about our intended use of the counter-cyclical buffer, so there can be some anticipation of it being increased. That gets

to my second point, which is that in the system, wherever the minimum is set, institutions will normally run with a buffer above the minimum, because they do not want to have a couple of bad quarters and end up having to raise capital instantly. We also took that into account when setting the minimum level.

The final point, and again Mr Taylor gave one example of this, is that individual institutions will have issues that need to be corrected, and that will go above and beyond. For example, pension deficits are an issue for some of our institutions. They have to hold additional capital in anticipation of that. We are looking to improve the measurement without question of the risk weights, but there may be some cases where concentration is inadequately measured or some other aspect of the risk-weight system has to be corrected for. That is either zero or positive and, because of that, it means running with a bit more capital as well.

Q109 George Kerevan: My interpretation of the general points that both of you make is that the key difference now is the bank resolution regime and the ability to change debt into equity. We have not yet seen a serious example of a systemically important bank going through such a resolution. It is a theory. Just read me through how confident you are that, actually, that first resolution, when it happens, will be successful, because that underpins your whole new regulatory structure.

Dr Carney: Maybe I will start. The distinction was rightly made between having the rules in place and actually having the debt in place—the bail-in-able debt in place. Most of our systemic institutions have enough bail-in-able debt; the problem is that it is not in the right place within the organisation, and so they have to go through a process over the next several years to refinance that debt and put it in the right place. That is the first point.

The second point, which is extremely important, is that the holders of that debt need to understand very clearly that they could be bailed in, for two reasons. One is that we do not want a situation, and the FCA has been very clear about this here, where there are a number of retail investors who own this debt and are surprised that they have become shareholders. As a consequence, we see some issues on the continent at present because of that. The second reason why we want it to be absolutely clear that your debt can be bailed in is that that knowledge exerts some discipline on the system. In fact, as a debt holder you will be expected to exert discipline to encourage the raising of equity alongside equity holders, who would then be diluted. There is incentive alignment there.

How confident are we? We think we have the right quantum identified, the right amount. We have the right structures. There are different structures that can be made work—single point of entry or multiple point of entry. We still are in the process of debt going in the right place, but the second thing that needs to happen in parallel is the reorganisation of these institutions in a way that allows the systemic aspects of them to be resolved and to carry on, if that is appropriate, so ring-fencing is a process that is underway. Also think about essential services or common services that are applied to the wholesale banks that need to be effectively ring-fenced themselves, so that those activities can continue.

Q110 George Kerevan: Can you give me a ballpark date when this general process will actually be at a stage when we can be confident the system will work?

Dr Carney: 2019 is the intent.

Q111 George Kerevan: I know it is the intent. I am not trying to trip you up; I just wonder if you seriously think that 2019 is reasonable.

Dr Carney: That is what we are working towards; that is what the institutions are working towards. There is a tremendous amount of effort behind this. It is a process for which the costs will be measured in billions of pounds, in terms of ultimately having these reorganisations. There will be a funding cost to the institutions, but of course that funding cost is the mirror of removing the implicit subsidy that has been given to the largest financial institutions by all the taxpayers of this country.

Q112 George Kerevan: Let me raise with you what has been a general concern raised about this new architecture. It is fine if one systemically important institution fails. That happens on a reasonably regular decennial calendar. Fine, the system might work. It will work; I will give you that. If we run into a situation, as we did in 2007-08, where it is not one major institution but a range of institutions that fail, and they all go into resolution, and then there is a significant shift right across the markets of bondholders being converted into equity holders, is there not a serious risk that the capital markets will just freeze? It is a different process than happened when the money markets froze in 2007. Is there not an issue that, if the crisis is across a whole range of institutions, the capital markets will just lock and that a system designed to deal with a single failure will not work if there is a systemic failure across a range of institutions?

Dr Carney: If I may, let us take current developments to provide some context here. The first thing about the system, which is not fully in place, but much has changed directionally, is that it makes it much less likely that we would have that sort of networked multiple failure of systemic institutions. It does not make it impossible, but it makes it much less likely, because what is happening right now is a sharp repricing of a wide range of assets, a change in expectations for the growth prospects of the largest continent in the world, with significant knock-on effects for the global economy, and sharp increases in financial market volatility.

What is not happening right now is any concern about distress at any of the major systemic financial institutions, either direct or indirect stress—in other words stress because another institution has large losses and there may be opaque or complex connections to each other, through derivative markets, through inter-bank borrowing or other exposures. That is a product of the reforms that have been undertaken. That is not an assertion. That is not whistling past the graveyard. That is a statement I can make as a product of our oversight of a number of these institutions directly and indirectly, through our global partners. In the past week, I have met with a number of CEOs of major institutions and confirmed those

impressions. That is an important point; the core is not amplifying the stress that is coming out of the real economy.

Now, there is something lost in that. In part, it is market liquidity, an issue that I am sure we will come to and the Chairman has raised, but it is a far better position in which to be. I would submit that what has to happen for multiple systemic failures is a real economy shock. It is much more likely to be a real economy shock to which they have common exposure.

Part of what we have been doing on the stress-testing side is to look at those real economy shocks. We looked at, effectively, a balance of payments crisis here, which channelled through the housing market in 2014, which was a huge real economy shock of 35% fall in house prices and associated fall in commercial real estate. Last year, we looked at a real economy shock that emanated out of Asia and then amplified through and led to real economy effects in the UK. It is not impossible to have things of this order of magnitude, but it is much less likely. It does not get amplified by the core.

In the event of something like that, the authorities will have many more options to manage the situation. I will finish with this. As that shock unfolds, the capital markets are going to encourage earlier action to address the consequences, so earlier action to conserve dividends, raise capital, shed businesses and take reserves, because the oversight should be that much greater.

Q113 George Kerevan: My final question, Chair, is perhaps to Dame Clara. When we move from stage two to stage three, you define it as a shift from risk to elevated risk. When you are evaluating such a situation, how would you define elevated risk?

Dame Clara Furse: We would want to see significantly more credit growth than we are seeing at the moment. At the moment, we are seeing an improvement in credit growth. I would not call it anything like an acceleration, so it is actually quite modest, in my view. As the Governor has already said, for the first time, we have seen a net increase in lending to SMEs and that is quite small, 0.6%, but it is a turnaround, so that is positive but it remains modest. Corporate lending and corporate investment remain subdued. I would say that a shift from two to three would imply that we would see much more energy coming from the corporate sector, in terms of lending and investment in particular.

Q114 Mr Rees-Mogg: Mr Brazier, you have been very silent so far, so I wonder if I can ask you about the essentially arbitrary nature of the counter-cyclical buffer. How is the committee on which you serve able to get it right?

Alex Brazier: I would not characterise it as arbitrary to start with, but I would bring it back to stress-testing. You think of the counter-cyclical buffer and our objective with it as ensuring that the banking system has sufficient capital to deal with the risks that it faces. You face two choices. One is to capitalise the banking system at all times for peak risk environments. That is not an efficient way to build a financial system that serves the real economy. We are trying to build an efficiently capitalised financial system.

Stress-testing allows us to make an assessment of the risks that banks face. As the Governor described, in 2015 it was focused on emerging market risks. In 2014, it was focused on effectively a UK balance of payments crisis. That tells us about the impacts of those risks on the capital position of the banking system and gives us some guide to how we should set the counter-cyclical buffer. Now, we only do stress-testing once a year. We need to set the counter-cyclical buffer once a quarter, but the stress-testing framework that we have developed for the next few years gives us a way to take our risk assessment and turn it into an assessment of how much capital the banking system needs. It is that that removes, if you like, your arbitrary characterisation.

Q115 Mr Rees-Mogg: Does it really, because do we not only know where we were in the cycle retrospectively? That has always been the problem of cyclical management that both governments and central bankers have faced.

Alex Brazier: If we viewed this as an exercise in spotting exactly where we were in the cycle, we would fall into exactly that trap. The way we approach financial stability is not to say where exactly we are; it is to say where we could be. What is the tail of the distribution we face now? We are not trying to pick the centre of it. For example, when we designed last year's stress test, we did not ask what the most likely outcome in China is. As you say, that is very uncertain. We asked what could happen in China that could impact our banks, which we need to make them resilient to.

Q116 Mr Rees-Mogg: Does that not reinforce the essentially arbitrary nature of it? If you are regulating for what could happen but does not happen, it is essentially your judgment as to what could happen and how bad it could be. Therefore, it is very imprecise. It is a well researched best guess.

Alex Brazier: Inevitably, it comes down to judgment at the end, but it is a judgment based on evidence, and evidence about the risks that the banking system faces—and we should be judged in part by whether the risks that we see are the ones that the banking system faces—and on our judgment about the resilience of the system. That is not arbitrary either. That we test with stress-testing.

Q117 Mr Rees-Mogg: In this, what is the risk that you and the MPC end up doing contradictory things, to the extent that you are already maybe doing them? The FPC has a very low interest rate and clearly wants there to be more lending in the economy, but you say that the economy is now back to a more normal stage and may be thinking about adding a 1% counter-cyclical buffer, which studies show has a 5-to-10-basis-point increase in the spread that banks will charge. At 0.5% Base Rate that is quite a big increase in interest rates passing through the system, created by one committee against the other committee.

Alex Brazier: Let me give you two parts to the answer, a process one and a substantive one. The process one, just going back to the conversation earlier, is that, as we reach this point of the standard risk environment, co-ordination between the committees becomes more important than it has been to date. That is exactly what we are doing; we are upping our game in that respect. For example, in designing our strategy for the counter-cyclical

buffer, which we put out in the Financial Stability Report, I had a number of sessions with the external MPC members to ensure they were fully briefed and comfortable with where we were going. As Clara mentioned earlier, through this year, we will have at least four joint meetings of the two committees to talk about and build a shared understanding of how we will react to each other.

On the substance, you have to remember that, without macro-prudential policy, monetary policy may face a difficult trade-off between hitting the inflation target in the short and medium term, and hitting the inflation target in the long term. In that sense, macro-prudential policy is an important complement to monetary policy. By managing the risks that inevitably emerge in a low interest rate environment, we take off the table some of the risks that the monetary policy would otherwise find itself faced with a hard choice about responding to. You raise the 5-to-10-basis-point number. There is a lot of uncertainty about that. In raising the counter-cyclical buffer, we are having a small impact on the central outlook for the economy—a small impact. The MPC is comfortable with that, but what we are doing with it, by building a financial system that is resilient to the risks it faces, is taking off the table some of the bigger risks that the MPC would not really wish to find itself facing down the road.

Q118 Mr Rees-Mogg: That is a very interesting answer, but is not part of what the MPC has to do to create the risk that may lead to economic growth continuing to grow or inflation getting back to its target? The ability to have a monetary policy that is risk-free is fundamentally unrealistic. Part of the reason monetary policy may work is because people take risks.

Alex Brazier: That is a good point. Part of the issue about interest rates being low is not that we want to abolish risk-taking. Our housing actions are a good example of this. Interest rates have been low for a long time; have they encouraged consumer spending and suchlike? Yes. What the MPC is interested in is not dampening that central outlook, but it has taken action to ensure that a tail of highly indebted households does not emerge as a result of this. Now, that may have some small impact on the central projection, but the actions we took were an insurance policy against the growth of a very highly indebted population of households.

That is a fundamental point about the difference between macro-prudential policy and monetary policy. Monetary policy is, if you like, delivering averages. Macro-prudential policy is about taking out the tail risks. That is one reason why we will not find ourselves tripping over each other and why, in general, we will find what we are doing to be complementary to each other.

Q119 Mr Rees-Mogg: Thank you very much. Mr Taylor, I wonder if I could ask you a little bit about the bail-in-able provisions and the extent to which they are very important for the largest banks but that, for smaller banks, it becomes almost anti-competitive. They have to have such a high level of capital at higher cost than their capital would otherwise be. It makes it harder for them to challenge the banks that are absolutely crucial to the economy, when the small banks are not. Is there a competitive problem in it?

Martin Taylor: As I understand it, the smaller banks do not have to carry this kind of debt. They have a different capital regime, in any case. Are you thinking of the challenger banks?

Q120 Mr Rees-Mogg: I am thinking of some of the medium-sized ones. The Coventry Building Society, for example, is going to have some bail-in-able debt and it is by no means essential to the stability of the financial system. I just wonder whether there is a risk there of thinking that, at too low a level, people are central to the systemic stability of the financial system.

Martin Taylor: I do not know. I cannot comment on that particular case. There are always some thresholds, of course, above and below which these things kick in or do not kick in. Those institutions that are near to the thresholds often complain about this. I do not know what the quantum is for banks of that size.

I was going to say in response to Mr Kerevan's question earlier, about whether resolution would work, which is what it really all comes back to, that I think, once the qualifications that the Governor rightly listed have been got through, supervisors have to be able to say, "Yes, this will work." We do not want to have a practice, thank you. We think it is very much less likely that there will be the kind of problem that we have had, because there is just so much more equity capital in the business.

What I think will begin to happen here, and this joins up with Jacob Rees-Mogg's question, is that as a bank begins to get into trouble, it will have difficulty rolling over its bonds. These will be relatively short duration. Bank bonds are usually five years at the moment, so the finance director of a bank is constantly rolling bonds over, and that is where the pressure point will come in and we will begin to see banks push to raise more equity. I will certainly have a look at the Coventry Building Society. I will ask the PRA about it.

Q121 Mr Rees-Mogg: Thank you. Could I ask one follow-on question to that and what you were saying about supervisors being able to say that they have ensured that there is enough capital to ensure that the problem does not repeat? Does that mean that the regulators are giving a de facto guarantee to depositors of 100% of their deposit, as they got through the crisis, in the event that the regulations brought in were not sufficient?

Martin Taylor: I do not believe that they should do that.

Q122 Mr Rees-Mogg: Do you think there is a de facto one through these mechanisms? Capital rights have gone to such a high level as bail-in-able debt. Are we leaving depositors with the impression that we now have such brilliant regulation and supervision that there is no future risk to deposits?

Martin Taylor: In the large banks, I would hope that that would be effectively true. Whether the supervisors should say it is a different matter. I do not think that the supervisors should go around creating moral hazard. I am new to this world, and I

recognise and understand that my colleagues in the Bank and in their counterparts overseas are most reluctant to make boastful claims about financial stability. They have all lived through too much to say that but, as far as I am concerned, if we do not believe that the regime we are putting in place, which we laid out in the FSR in December, is going to do the job, we should have a different regime. Actually, by putting this regime forward, we are saying that we think this is the answer.

Q123 Mr Baker: Good morning. Governor, I hope you will forgive me if I try to get our money's worth from the externals in the course of my questions. Mr Brazier, in your writing on the Bank's document about its approach to stress-testing, you explain that, if the FPC or the PRA decides to change capital buffers following the tests, the FPC would move first. Why should the FPC move first?

Alex Brazier: It is because what the FPC does goes system-wide, so it will apply to all banks. The counter-cyclical buffer applies to all banks. The natural way to do this, and let us just take a very simple example, is you have the results of a stress test across the system; the right way to do it is for the FPC to say, "What is the common system-wide element to the impact of the stress test?" We will set that bit. The PRA can then come in and say, "Okay, who needs an additional top-up on top of that?" If you do it the other way around, I think it would make life very difficult. Separating the common system-wide element has to be the first step.

Q124 Mr Baker: Is the reason that that is done because it is following the stress tests? If the PRA thought that two or three banks needed to, then they would move. You are nodding, for the record.

Alex Brazier: First of all, it is important that we do not duplicate what the capital requirements are trying to do. The PRA should not set a capital requirement on an individual bank or a number of individual banks that effectively does double duty. That is part of the issue we face at the minute with the counter-cyclical buffer, and maybe we will talk about that later. The issue with additional capital requirements for individual banks should be that they reflect banks that either have books that are riskier than the average or banks that face different risks to the system as a whole, because they have a different nature to their exposures, for example if they are more international.

Q125 Mr Baker: Just thinking about some real-world events, for example the oil price, those real-world events have been more severe than those in the stress test. Do you think, Dame Clara, that the Bank might justify a more severe stress test next year, on the basis real-world events this year?

Dame Clara Furse: If you look at the 2015 stress test as a whole, you will see that it actually does contain what I would consider to be a global shock scenario. It paints a picture of a very severe global market downturn, of which the collapse in the oil price was just one factor. We had a much more severe decline in global GDP. We had quite significant effects into the UK, so a very sharp fall in CRE prices, a very sharp fall in housing prices and a sharp increase in inflation—excuse me, that was 2014. We had a

deflationary scenario. The picture as a whole was very severe indeed, so I do not think that that single component of the oil price fall is necessarily significant on its own, although we did paint a picture whereby the price would fall from \$70 to \$38, and today it is around \$30.

Q126 Mr Baker: Writing for *Forbes*, Benn Steil of the Council on Foreign Relations, who does their international economics, explained that the Fed rate rise tends to drive emerging markets to borrow in euros, thereby exposing them to currency risks. He particularly suggests that this means that emerging markets are therefore speculating on a falling euro. Do you think he might be right and do you think that that phenomenon might be a material risk to financial stability, because emerging markets are in a position that perhaps is unprecedented?

Dame Clara Furse: I have not read Benn Steil's piece, so I cannot comment on that particularly, but clearly we do have capital flows moving around the system very quickly. The dollar is up quite sharply. We have seen capital flows coming out of China as well. It would be surprising if there was not some money flowing into the euro but, in general, the euro has been under downward pressure. You are always going to get capital flows in a global economy.

Q127 Mr Baker: Mr Taylor, what is the risk weighting on OECD government debt?

Martin Taylor: On OECD sovereign debt, it is effectively zero.

Q128 Mr Baker: Does that include Greece then?

Martin Taylor: I do not think that is correct anymore, because of Greece's credit rating.

Q129 Mr Baker: It is not a blanket rule for all OECD debt.

Martin Taylor: No, it used to be, but there is a credit-rating floor on it now.

Q130 Mr Baker: Is that true? Perhaps you might just confirm that, Governor.

Dr Carney: The point is correct. May I add that, as we sit here, the Basel Committee is reviewing exactly this issue, including moving towards a more standardised approach to capital provisioning against sovereign risk, for which it would likely, almost certainly, raise the capital required against it.

Q131 Mr Baker: Just turning to the Basel Committee, my good friend Professor Dowd has written quite extensively on the Adam Smith Institute blog about these stress tests. I cannot go through it all, but he suggested a more conservative common equity Tier 1, stripped in particular of intangibles. He suggests that, if you go through the tests, for RBS, you get a leverage ratio of 2.6% and a clear fail. He goes on that if you applied the Basel III tests, the hurdle ratio would become 4.4%, giving a shortfall of 1.8% for RBS. Have you given any consideration to what the results would be if you applied those phased-in Basel III requirements to all of the banks?

Dr Carney: I have not read his article and we can look at it. We have phased in 2019 Basel definitions. I have not read it, so I should not comment, but the fact is that, unlike some other jurisdictions, our capital definition is end-state capital definition in the UK. On an apples to apples basis, it is there. Of course, the cross-check for all of this, as you rightly point out, is the leverage ratio. It is one cross-check to this.

Q132 Mr Baker: Perhaps, with the Chairman's permission, I will correspond with you on this, because Professor Dowd explains that, in his view, every single one of the seven banks in the stress test would have failed.

Dr Carney: Let me state this, because I do not want to have that stand. The judgment of the FPC and the PRA takes into account the severity of the stress test, which is far more acute, severe, sustained, chronic, substantial and having a direct impact in the UK economy than anything that is happening at present. I do not think anyone should be under any confusion about that. This is a much more severe scenario than what we are living through right now or prospectively seeing, even with downside scenarios. That is the first point.

The second point is that the judgment is made on the basis of a variety of measures of capital adequacy and includes the capital plans of the individual institutions. You will see, both in 2014 and in 2015, as you will recall, that a few institutions passed with the capital plans that they had developed over the course of the year, in part informed by the type of stress scenarios that we were discussing. I am happy to correspond on the specifics, but on the general conclusions, we should not put a cloud over it.

Q133 Mr Baker: I will ask Professor Dowd to read the transcript and then work with me to send you a letter about this. Could I just finally ask you if the Bank would ever consider letting an external body specify the stress tests?

Dr Carney: It is part of the responsibility of the FPC to identify these tail scenarios. That identification certainly should be informed and is informed by discussion with external bodies including, in the case of this past year, the IMF being involved. They reviewed the draft stress scenario and gave some commentary, which was helpful in thinking about how the global linkages or the channels of contagion could come back to the United Kingdom, so that we had a coherent stress test.

The last point I could make is that one of the distinctions between this stress test and the macro-element, say, of the EBA stress test last year is that we tried to make the asset price

moves and potential counterparty defaults that happened in this stress test—and we had counterparty defaults in this stress test as well—consistent with the underlying fundamental shock, so where correlations went and who defaulted. That makes it much more severe, because it is much easier, if I could put it this way, to have orthogonal risk, arbitrary risk, which is layered on top of a fundamental change.

Q134 Chair: I would like to go back briefly to an answer you gave, Mr Brazier. You said that the FPC takes risks off the table that the MPC will then not subsequently have to face. I think I have summarised correctly. Of course, it is quite possible that the FPC may put on the table risks that the MPC would not have to face, if you get it wrong, for example, or even if in getting it right within the narrower area that you are looking at, for example perhaps mortgage credit risk, if you decide to relax conditions or the type of conditions at a time when overall macroeconomic conditions would point to the opposite. You are not necessarily taking them off; you might be putting them on.

Alex Brazier: I am not sure I agree with putting them on. I go back to the point about distributions. In the owner-occupied housing market, in 2014, the action we took then was to prevent a tail of highly indebted households from emerging. At the time, we did not think that that action would bite, because the threshold we set for the proportion of mortgages that could be at high loan-to-income ratios was in excess of what was actually going on. It was an insurance policy against a risk building. In that sense, on the face of it, going back to your question, it looked like it may have been contradictory with what the MPC was trying to achieve at that point, but in no sense was it contradictory. It actually helped the MPC to sustain the monetary policy stance it thought was warranted to hit the inflation target.

Q135 Chair: Are you saying that it is impossible for these circumstances from those who said we needed one committee, among others, to occur? Are you saying it is impossible that we are going to find that the MPC is pulling in conditions of tightening policy, while the FPC is pulling the other direction?

Alex Brazier: It is not impossible, but concerns about it can be overblown. The question of joint committees is a question for down the road. Maybe in many years' time we should consider it, but let us see how it goes.

Q136 Chair: I am not advocating it at this Committee and this Committee certainly is not. It is our job to probe these things and to keep these issues under review.

Alex Brazier: We are alert to the possibility that we could take actions that, even if they are not overlapping or contradictory, the other committee will in some way wish to know about and may choose to respond to. That is why we are upping our game with the process for co-ordination.

Q137 Chair: In this question of taking things off the table or putting them on the table, you think that it is overwhelmingly likely that you are going to be taking them off the table and helping the MPC.

Alex Brazier: More often than not, we will find ourselves complementing each other, rather than contradicting each other.

Q138 Chair: More often than not—I do not want to pin you down too far, but are we talking about much more likely than not?

Alex Brazier: It is much more likely that we will find ourselves complementing each other, rather than contradicting each other. You are sounding like you are falling into Mr Rees-Mogg's arbitrary trap.

Q139 Chair: He may have been on to a point there too. I just want to pick up one other point, which may just be a point of clarification. You were talking about not trying to spot the cycle, but study the tail, rather like a comet, I suppose, where you do not know exactly where the comet is at any one time, but you can at least see the tail that it has generated. Presumably the reason you are really interested in the tail is that you ultimately want to know where the comet is, and the reason that you are studying the tail is because you want to make an overall assessment of the cycle, is it not?

Alex Brazier: Let me give you an example. Let us suppose we wanted to think about the housing market. That is always the easiest to think about. You can look at metrics of house prices to earnings. You can look at rental yields, for example. You may take some comfort from the fact that rental yields in particular, in most areas of the country, look in line with long-running averages. If you were trying to spot the central outlook for the cycle, you may say, "Fine, everything is okay."

When you look at it another layer down, you ask how much work you are having to do to assume that everything looks okay. How much work are you having to do to assume that yields are lower now than they were, on average, in the past? The answer is a lot. On that basis, your view of the tail event would be bigger than it was in the past. We are not just trying to assess how things look upon the face of it today. We are trying to ask the question: how bad could it be? That is where we use our risk appetite and why we try to specify what could happen. The most interesting thing I heard a senior policymaker say about the financial crisis, not a Bank of England policymaker, was that we spent far too long thinking about whether there was a housing bubble and not enough time thinking about what if there is a housing bubble.

Chair: That is a very helpful clarification of this tail metaphor that you were bringing in and I am extending.

Alex Brazier: I may steal your comet analogy.

Chair: The Governor wanted particularly to get in earlier, but he is now relaxed by the answer of his deputy. Stephen Hammond.

Q140 Stephen Hammond: Good morning. The level of the oil price has actually fallen below the level that was used in the 2015 stress test. If I heard Dame Clara rightly in her answer to one of Mr Baker's comments, she said that the drop in oil price by itself was not significant or not overly significant. I cannot remember exactly the phrase you used. Could I ask you, Dame Clara and Mr Taylor, what the FPC's assessment is of the risk to oil price? Should I take it from that comment that you are relatively relaxed about the risks posed at the moment?

Dame Clara Furse: I do not think that I said that it was insignificant. I think what I said was that it was one factor within a broad scenario that painted a picture of a very severe downturn, a global shock—in fact, a global shock that is significantly worse than anything that we are experiencing right now. I would not say that we should be relaxed about what is happening in markets. In fact, our job is not to be relaxed, as Alex has just indicated, so we are constantly trying to evaluate future risks.

One of the things that we see today is clearly a lot of turbulence in markets, an increase in global risk aversion, concerns about global growth and very sharp falls, not just in oil, but in commodities generally. What that has meant is that we are seeing a repricing of risks in markets as a whole. That is creating some turbulence. This is something that we have flagged for some time, so the FPC has been looking at changes to the market, to the shift away from credit production by banks to capital markets activity. That is a very important positive shift. That then implies that capital markets and market-based finance need to be more resilient, so we have flagged the potential for market fragility in this context as a worry for some time.

Martin Taylor: Let me add to what Clara said. First of all, she was right to point out in her earlier answer to Mr Baker's question that there are many elements in the stress test that are very much worse than what has so far happened. From memory, we said that Chinese growth would slow to 1.5%. I think that would be quite a major dislocation, if it were to occur. Actually, I think we got the oil price roughly right, directionally so, but the job of the stress test is not to forecast; it is to imagine a coherent set of possibilities, one hopes quite unlikely possibilities, and then just see what would happen to the banking system if they were to occur.

On the oil price, of course, what principally worries us is that, when you have a dislocation of this scale, you do get economic agents on the wrong side of it. Some of them are highly borrowed. Some of them, to go back to Mr Baker's question earlier, have borrowed in the wrong currency or have borrowed in a currency that is not the currency that they are selling their product in. A foreign currency debt mismatch is a thing that comes up again and again, in times of financial turbulence. One sees it, whether it is in the Polish housing market or people borrowing in US dollars in South East Asia. Yes, this is a concern, and one does not know quite who is holding the baby. You do not know who has got the bonds and who has got the bank debt.

Q141 Stephen Hammond: Most of the weekend press and the market analysis is suggesting that the oil price is likely to trade at fairly tight range, at a much lower range—\$25 to \$35 a barrel—for the next two years. Is that a view that the FPC holds?

Martin Taylor: I have no idea where the oil price will be. I have never met anyone who is any good at forecasting it. We have many opportunities to look foolish on this Committee, and that is one I would rather not walk into.

Q142 Stephen Hammond: That is fair enough. Any of us who has worked in the financial markets knows that oil prices and exchange rates are about the most difficult to predict. You made the point about economic agents and how they have reacted. You have obviously read the Paul Krugman article, I assume, about the relationship between the scale of the fall and that, while a small scale is generally regarded as expansionary, the sheer size of this scale has meant that it is inevitably negative. Is that a view that you hold or is it just the fact that the world is in a liquidity trap, so the scale of any fall would be problematic to growth?

Martin Taylor: I am most worried about the dislocation that the scale of the fall suggests, and the fact that we do not yet know what effect it will have. An awful lot of the markets' difficulties, it seems to me, are to do with the inability to identify just quite how bad things will be in certain quarters. Maybe we will get some clarity on that in the next month or two.

Q143 Stephen Hammond: Governor, you have obviously seen that a number of American banks have started to add extra provision for the fall in the oil price and the effect of that on their ratios and balance sheets. How do you expect, or do you expect, to see that in the UK and some of the UK banks, given our lesser exposure, but nonetheless exposure to the oil sector? Also, what wash-through might we expect from American banks in the UK system having to do that?

Dr Carney: My first point is to associate myself with what Mr Taylor just said, in terms of any time you have a very sharp and, more likely than not, sustained decline in an important asset price, as is oil, there will be some dislocation. Some of it will be not exactly where you expect it, and partly that uncertainty helps feed a much more risk-averse environment. That is a general point.

On your specific question about banking sector exposure to oil or energy, and I would group it as commodities as a whole, the first observation is that some of the most acute adjustments are going to take place in the US high-yield market. We are seeing in US high-yield market and associated leveraged loan market levered to the shale industry that has grown up there. That in part is why one is seeing more accelerated reserving from some US institutions. With that said, the financial position of a number of commodity producers and sovereigns has deteriorated to varying degrees, and there will be exposures there, including of UK banks.

I will make two points. One is a micro point, which is that, as you would expect, the PRA as the supervisor has been reviewing these exposures over the course of the last year and has heightened surveillance of that, as have the institutions themselves. Well run institutions are looking hard at their portfolios, reserving against those where necessary, monitoring and taking mitigating actions for those that are more at risk. That is a natural product of this part of the cycle and that all means that the financial conditions for commodity producers, writ large, are tightening quite significantly, as you would expect.

Speaking as I do in the context that I do today, as Chair of the FPC, we felt that the scenario was not just oil, but also included broader commodities and included outright counterparty defaults. Actually, when you roll in the commercial real estate hit and the domestic hit that happened as a consequence of all these factors, effectively a multi-year recession in the United Kingdom, unemployment going to 9% and other factors that were there, I will just give you one other fact from an asset price perspective. We had Asian equity markets down a half to two thirds, in orders of magnitude, in that scenario. That is not a forecast, but that is a tail event that would be consistent with very low Chinese growth in a global disinflation or deflationary scenario.

The consequence of all that, if you wrap it all together, is about a 3.5 percentage point hit to the capital positions, in aggregate, at the core of the financial system, so a hit to the capital position that, in sterling terms, is analogous to the hit during the events of 2009. They have different origins, but a same rough order of magnitude. The difference, of course, is the starting position of the institutions, and this was the starting position at the start of 2015. That starting position was further augmented over the course of 2015 by natural capital build, but also some discrete capital-raising measures from certain institutions, which was at least partially informed by this stress scenario.

I will finish with this. While one can expect, when there has been sharp dislocations, that there will be credit losses—there will be blood, if you will, in those areas—it has to be set against where the resilience has come.

Q144 Stephen Hammond: One of the things we are all quite interested in absolutely are dislocations and adjustments, but how far through some of that process are we already and how much further of that is there to go. Can I just cite two particular areas where your comment would be useful to inform us about where we think you might be or where you think you might be, through that process? First, you talked about the drop in Asian markets. It has not dropped as far, but we have seen a severe curtailing of Chinese growth. We all know the capital positions, therefore, some of the changing positions and what they are doing.

Equally if you look at the Middle East, there is a potentially geopolitical, as opposed to economic, reason why we may see oil continue to be over-supplied, particularly from the Iranians, which is beginning to have a severe impact on Saudi, and that is having some impact on what they are doing with their reserves. Some of that is sterling. Therefore, these sorts of dislocations are not over. We are just partially through that person. I wonder if you see that those sorts of risks are still there for UK markets.

Dr Carney: I would say, speaking directly on credit risks and the credit process, the gradual impairment process reserving around that, it is still early days in that process. It will depend on how low and how persistent commodity prices are and, in part, it will also depend on how well those situations are managed, but these are relatively early days in terms of that process.

I agree with you that the view of the Monetary Policy Committee, which is shared by the FPC, is that the shifts in the oil price are heavily influenced by supply developments, not exclusively by supply developments, but certainly some of the shifts in terms of access to the oil market and the shifts in OPEC policy are changes in the reaction function in oil, if

you will, the supply curve in oil, which are likely to persist for some time. It will be some time before supply destruction in shale and other areas, and the combination of that and demand increases, will restore a higher equilibrium. We would expect those adjustments to take place.

I would generalise without speaking specifically about any specific currency. We are in an environment of heightened risk aversion that may persist for some time, and it will affect both those currencies that are viewed as safe havens and those that have a bit of a risk premium attached to them. Authorities need to manage that accordingly.

Q145 Stephen Hammond: My final question is with regard to your last comments about the risk premium being attached to certain currencies. Given the importance of certain of those currencies, do you think that OPEC will survive this crisis?

Dr Carney: Given technological developments and the spread of potential supply, the ability of OPEC to influence the global price has been diminished, but the competitive position of the major OPEC suppliers, particularly Saudi Arabia, is unrivalled. It is still the cheapest source so, over the medium term, OPEC having some influence but at a much lower price is a possible scenario.

Q146 Chair: I just want to get clarity on this question before I bring in John Mann. To hear a group of central bankers apparently, virtually, begging for higher oil prices is, I hope, not what I am hearing.

Dr Carney: We are not at all, absolutely not. I am responding to questions about the dynamic of it. I will state it clearly.

Q147 Chair: Just to be clear, in the long term, is a low oil price good for growth and for economic welfare?

Dr Carney: Yes. That is clear. I would pull it forward from long term. I would pull it to the medium term. Look, when you have a dislocation that flows through to financial asset prices, that obviously has a dampening effect. Some of the capital adjustments may be more rapid than the consumer adjustments, but we have already seen some of the consumer payback, for example in the United States in auto sales, here in auto sales and other factors. It is a net positive for the global economy, in my view.

Q148 Chair: Governor, speaking personally, which I very rarely do, I agree with every word of what you just said and I found that Krugman piece somewhat offbeat, but it sounds as if you do too.

Dr Carney: If I had read it, I probably would have, yes.

Chair: I think you have all you need to know already.

Q149 John Mann: No one ever came to this Committee and said, “I just want to warn you that oil prices are going to significantly fall in the future.” That has never happened. Mr Taylor, one thing that is a scenario that is potential projectable is that, in June, the UK votes to leave the European Union; the SNP immediately calls a referendum and the European Union gets very aggressive in response to us leaving. In these stress tests, are there particular financial institutions that are much more vulnerable than others to that scenario?

Martin Taylor: All the financial institutions are less vulnerable to such a scenario than they would have been two or three years ago because, as the Governor has said, they have built an awful lot of capital since then. It is very difficult to speculate about an outcome that is two or three hypotheses away, including the timing.

Q150 John Mann: Sorry, just to stop you there, it is not difficult to speculate that at all, in terms of realistic scenarios, whether one calls them risks or anything else. It is not unrealistic to speculate that; it is very realistic to speculate that. That is an option that might happen.

Martin Taylor: If I may just finish the sentence, I had reached a comma, Mr Mann. If you look at the stress test designed by the FPC in 2014, so two years ago—not the one we have just had, but the one before that—people who are guessing the kind of shock that might happen in the UK in such a scenario could find some comfort there. We had a run on sterling. That was how that particular stress test started, a run on sterling, a sharp rise in interest rates and a sharp fall in house prices. That is one potential hypothetical outcome. We covered that in the 2014 stress tests. A couple of banks had to raise a bit more capital then, but they would not have to now, because they have built it.

Q151 John Mann: Governor, can I take it that, whatever scenario outcome, nobody should be worried about financial stability?

Dr Carney: I am not following. Is this with respect to the topic you were raising, Mr Mann?

John Mann: Yes, which is one that next time you are here we could be discussing.

Dr Carney: We have a responsibility to address all potential risks to financial stability, including managing contingencies around potential market dislocation for certain identifiable events. You can expect that the Bank of England will take those responsibilities and that the FPC will be briefed on those measures. We will reveal, after the fact, the broad thrust of measures we have taken.

In terms of an overall economic scenario where, as Mr Taylor said, whether it is because of oil or other events, a heightened risk premium attached to sterling causes the MPC to have to pursue pro-cyclical monetary policy, in other words tightening monetary policy as the economy slows, was the scenario we did undertake in 2014, with interest rates going up 3.5%, unemployment going up 4.5%, the housing market falling by a third, commercial real estate falling by that order of magnitude and a three-year recession. What we can say

in terms of taking our responsibility seriously is what we have done with that information, those scenarios and those discussions is to look, as best as possible, to ensure that the banking system is capitalised for that type of tail-risk possibility.

Q152 John Mann: I just want to be clear that my constituents who have bought a new home or just invested in a new business can sleep comfortably in their beds and that, whatever decision is made, there is going to be no significant impact on financial stability in this country and whether that is your view.

Dr Carney: Material decisions can have an impact on financial stability. Our responsibility is to ensure that the resilience of the system has been increased in order to withstand those. If I may, a scenario where there is a three-year recession, unemployment effectively doubles and house prices fall by a third is a scenario that we have run, which we have capitalised the system to and a scenario under which, in our judgment, that system would still be able to lend to the real economy to satisfy the demand for credit in the real economy. As you can appreciate, the demand for credit in the real economy in a three-year recession is much more modest than the demand for credit in a sustained expansion.

Q153 John Mann: When you are reporting, Governor, every time I raise immigration, nobody wants to say that there are any issues with it of any kind, on this Committee. You appear to have made some comments that have been interpreted as saying that the levels of migration into the country are a key factor in holding down wages. Is that an accurate representation?

Dr Carney: It is not an accurate representation of what I said. The work that we have done, and I am speaking with respect to the Monetary Policy Committee, suggests that the impact of net migration on wages, and ultimately on inflation, is quite modest, the reason being that new migrants to this country tend to work and they tend to spend all their earnings. The consequence is not just a greater supply of labour, but there is greater demand. We provided sensitivities analysis around this most recently in the May inflation report of last year.

Q154 John Mann: I was going to ask you—and my question is now redundant, but I had written it down yesterday—which of your employees was going to be appointed to run the FCA. I will still ask my follow-up question, if I may, as you are here. Is there anything at all that links your organisation or anyone with it to the dropping of the culture review within the FCA—emails or minutes?

Dr Carney: The short answer is no. The decision to drop the culture review was entirely the decision of the FCA's senior management, as I think the testimony has been here. I, Andrew Bailey and other governors found out about it when it entered the public domain, not when the decision was made, but when it entered the public domain earlier this year. That is when it entered into the public domain and that is when we found out.

In terms of lower down in the organisation, there were one or two people who were aware of a draft memo that was part of a process that ultimately was an early stage in the process

of discussing the issue, but that was not escalated within this organisation, within our organisation, either the PRA or the Bank of England; nor would one really have expected it to be, since it was a decision for the FCA and, at the time of the sharing of the information, it was not obvious at all in which direction that decision was going.

Q155 John Mann: It is just that you seconded a member of staff to the FCA at the time to oversee this.

Dr Carney: We did not second a member of staff to oversee this specifically. We seconded a member of staff to reinforce the management of the FCA following the departure of Mr Wheatley. I do not think we have any apology to make on culture. We have surfaced these issues of banking culture and culture in the financial markets because they have started to affect the delivery of our remit of financial stability. We initiated the Fair and Effective Markets Review, alongside the Chancellor. We have spoken at length on these issues. We have helped devised a series of measures consistent with our responsibilities to help address them. The Senior Managers Regime came out of work with a number of members of this Committee, and had its genesis, I would add, in the Vickers Commission. We have worked to push this forward. I have personally raised these issues and put them at the centre of the FSB agenda as well, so we have consistently worked on these issues.

What is in our interest, in the FCA's interest, this Committee's and ultimately the people of the United Kingdom's interest is that we effectively improve the culture of these institutions. Now, the FCA made a specific judgment about how best to do that, within the range of their responsibilities, and they have answered for those judgments.

Q156 John Mann: Every single consumer champion within the FCA structures has been removed over the last three months, every single one. Would I be right to predict that none would be appointed to replace them? In other words, what you are doing is saying that the prudential risk is what is critical, but the consumer side is downgraded.

Dr Carney: No, I am not saying that. Mr Mann, I am not saying that at all.

John Mann: That is what is happening.

Dr Carney: I am saying, and we have said repeatedly, in speeches, in studies and in prudential reforms, that these issues of banking culture have risen to a level above and beyond consumer protection, and moved into issues of financial stability. That is why we have got involved in it. That does not, in any way, shape or form, downgrade the paramount importance of consumer and investor protection, which is a clear responsibility of the FCA. I have every confidence that the new CEO of the FCA and the senior management of the FCA will be addressing these issues, but they are the ones to answer for them.

Q157 John Mann: Why are so many people so concerned that there has been this change of culture, including people on the inside? Why is there suddenly

this huge concern? For example, someone identified to me yesterday who the consumer champions are who had been removed. Now, I am sure somewhere that is public knowledge, but the consumer side is totally changing. It has been sidelined, for better or for worse. The Chancellor was very explicit in wanting to see a new arrangement in place. That is happening, but there seems to be a reluctance to accept that that is happening.

Let me come to what the consequences of it could be. One of the consequences could be that pensions and people's pensions funds are not properly regulated, that people get ripped off on costs and that is in the new regime. That is a danger that is there. Another risk would be that, if we were looking at the prudential side, then how you determine values and whether you dig down to determine values could be left to the banks to determine, rather than anyone seeing whether or not they are being overly generous to themselves. Culture is fundamental, is it not, to financial stability, and the system has changed significantly, starting with the sacking of Wheatley, over the last few months?

Dr Carney: To be absolutely clear, these issues of consumer investor protection are squarely the responsibility of the Financial Conduct Authority. The answers to your questions are their responsibility. The point I am making is that these issues of culture had risen to a level, and we are not satisfied yet with the response, that they affected financial stability and broader safety and soundness of the institutions, which is why the PRA and the Bank of England have supported a series of reforms including—and I will finish with this—the work of the Fair and Effective Markets Review, which was chaired by Minouche Shafik, Deputy Governor of the Bank and had a host of recommendations, which are being implemented as we speak.

The Financial Market Standards Board, for example, was newly created to create a new code for fixed income markets, which will be linked to the Senior Managers Regime. I will give you one example of this. We hosted that meeting in our offices yesterday, attended by a number of senior Bank officials, including Minouche, to move this agenda forward. We are doing what we can, within our remit, to move this agenda forward. I will repeat that I have every confidence that the newly appointed CEO of the FCA will ensure that the FCA fully fulfils its responsibilities in this regard.

Q158 Chair: Just on the consumer issues point, whatever noises off there may be elsewhere, I think I should just make clear that consumer issues are certainly not going to be sidelined by this Committee. On the recognition that conduct issues can also bring with them systemic risks through reputational damage, through fines for example, the recognition by the Bank of that is a significant development and what you have just said is very valuable.

There is just one question, though, that comes out of what John has just asked that does need to be followed up a bit. As you have just said, and I think we already knew, Andrew Bailey and the Bank of England—he is after all the Bank's representative on the FCA—did not know about the cancellation of this review, but it was a board decision to hold this review at the beginning. Does that give you some concern about the co-ordination between the Bank and the FCA that such a decision was not even available for you to think about, because your representative did not know about it?

Dr Carney: The appropriate channel would have been through the board of the FCA and, as you said, the board was not informed.

Q159 Chair: You are basically saying that, yes, it is problematic.

Dr Carney: We answer for how we manage the analogous boards at the Bank. If the FPC were not informed of adjustments to systemic elements of the Fair and Effective Markets Review or the PRA board was not informed of a change in our approach to capital regulation, we would have to answer to that, yes.

Chair: By a twist of fate, Andrew Bailey has now been sent over there to sort it out, so we will watch this space on this Committee. Thank you for those direct, if brief, replies to my rather long questions.

Q160 Rachel Reeves: I want to explore some issues around emerging markets and external risks. The Shanghai Composite Index fell by more than 6% yesterday. The Financial Stability Report and the minutes of the last FPC mention exposure to China and to Hong Kong as a particular risk. I wondered whether, Mr Governor, you could talk us through the transmission mechanisms by which events in China could impact on the UK economy.

Dr Carney: I appreciated that you highlighted multiple transmission mechanisms. There are the very obvious exposures, which are to the real economy. For example, we saw a one-third fall in UK exports to China last year. It is an outsize move. Part of it is affected by some specific things in the auto industry, but it is a material fall in those exports. On the margin, it makes for a more challenging position for our businesses.

Of course, the biggest direct transmission mechanism is the exposure of our financial institutions to Chinese entities. A few of our institutions have, quite sensibly, a strategy that focuses on China and broader Asia and, as a consequence, have lent to a number of entities in China and broader Asia. It is reasonable to expect that there will be some deterioration in the quality of those loan portfolios. Those are the types of possible developments that we looked at and we have looked at them, as you know, under a much more severe economic outcome for China than there is, so clearly there is an issue that one of the transmission mechanisms is reserving against loans to China, which affects the equity position of the institutions and their broader financial capacity.

Now, that is mitigated by the size of their capital positions. It is mitigated by the quality of the borrowers in China. As part of this process, we looked quite carefully, using the PRA, at the loan books of our institutions, were the companies exporters, the quality of their accounts, the seniority of the position in terms of the loans and the track record of the borrowers. We stressed defaults in China for the types of defaults that were seen in the countries most affected by the 1997 Asian financial crisis. We used those types. That is the next and probably most material transmission mechanism, then there are a series of indirect ones, as you can appreciate.

A lot of the financial market distress, some of which comes through commodity prices affected by the slowdown in China, but these large falls in the equity markets, sharp

increases in credit spreads, all combine with a flattening of the yield curve, because the scenario we run is a deflationary scenario, which of course reduces the net interest margins of the banks and reduces their ability to offset greater impairments. That also affects not just our banks, but affects our insurance companies and broader financial institutions in the UK, and tightens financial conditions in the United Kingdom, all things being equal, which is what we see. Some of that is offset with monetary policy but, given where we are, not all of it can be offset.

That is part of what helped contribute to a sharper move in real asset prices in the UK. Under our scenario, commercial real estate challenges are hit twofold. One, financial conditions get tighter, but also some of what has supported commercial real estate in the UK has been capital inflows, particularly from Asia. Mr Brazier detailed some of this. We adjusted for that. The consequence of all that is there are multiple channels by which these scenarios can feed back and did feed back in the consequences we have been discussing. At least in our scenario, it was a quite notable or severe recession in the United Kingdom, with a sharp increase in unemployment and a consequent fall in house prices and commercial real estate.

That all goes to underscore the genesis of your question, which is that, when things happen in a global economy, in particular to large actors in a global economy, it is not as simple as just looking at the trade shares and the direct impact through the trade shares. We could have relatively little exposure to China, and the bigger impacts really do come from these indirect effects, given the importance of China. That is something that we have to take into account as an institution, in terms of our forecast, in thinking that the current scenario is much more modest than the stress scenario, as you would expect, on the margin of the implications for the outlook for growth and inflation here.

Q161 Rachel Reeves: Can I just explore this a little bit further? The Bank for International Settlements shows that our holding of external loans is 28% of all Chinese overseas loans, so the largest of any external country. That seems to be concentrated in two UK banks, so I wonder how worried you are—and maybe Alex Brazier could come in as well—about the relative exposure of the UK compared to other countries. Is that 28% number not as bad as we might fear, because of particular banks being exposed?

Secondly, and you have explored it a little bit, Mr Governor, but maybe Alex might want to come in again, on the issue of capital inflows from China—and I want to talk about the current account a little bit more in a minute—how much of capital inflows into the UK last year were from China and what proportion of our capital inflows are from China? You mentioned the housing market, but I wonder whether another transmission mechanism that we should worry about is inward investment in infrastructure as well. Is that something we should worry about?

Dr Carney: With your direction, I will make a couple of quick comments on both and then pass to Mr Brazier. First, in terms of the exposure, yes, we do have a few institutions that have an Asia strategy or China strategy, with important and very competitive positions in those markets. As a consequence, we do look carefully at this, as does the PRA, as you would expect.

I would qualify the concern in a couple of respects. The first is the relative quality of the loan book, so these are the best and most privately oriented institutions, either directly with state exposure or to the best institutions, and institutions that are generating foreign exchange. They are senior positions in terms of the exposures to those institutions, so this is a high quality loan book. We did look at these loan books relative to other loan books, because we have some access and line of sight to a standard loan book in China.

The second point I would make is that, in some cases, some of the exposure is actually equity investment in some institutions. It is viewed as such. Some of the consolidation brings in bigger theoretical exposure, if you will, relative to a natural exposure. That may be a bit elliptical, but I will leave it at that. Alex will explain it all.

On your issue of FDI, I will confess that at least my reading of the information is that it is very difficult to give you a precise answer on destination of origin, in part because much FDI comes through third countries, for tax and other reasons. In general, what is happening in China right now—and I will finish with this and hand over—is that there is as much interest in investing abroad as there has ever been, including strategically. That is one of the challenges the Chinese authorities are facing, which is that, as they have liberalised capital outflows, there has been this desire to reallocate, including strategically. The consequence of that has made it a bit more challenging to manage the exchange rate.

Q162 Rachel Reeves: Are you suggesting then, Mr Governor, that in light of some of the uncertainties in China, it might make investors keener to diversify?

Dr Carney: There are some signs of that, yes.

Alex Brazier: I will just make two additional points, the first on your first question about the individual banks within the stress test. You can see in the distribution of impacts of the stress that some banks, as you would expect, are hit harder than others. There are no surprises to us in those results. It is not just that the system as a whole was sufficiently well capitalised to withstand the stress; it is that the individual banks within it, even those that took the biggest hits to capital, were also sufficiently well capitalised, particularly given the plans they had either started to enact or had put in place to withstand the stress. That is on the first question.

On the second, on the current account generally, I would make two points. The first is that the UK's current account deficit is large by historical and international comparisons. We highlight that in a chapter in the report. As the Governor says, it is very difficult to know exactly where those capital inflows come from and the nature of the flows, as far as we can tell, is as good as you would want. It is largely portfolio long-term investment and FDI but, nevertheless, the current account is large and that means that the UK is reliant on being or remaining an attractive destination for capital inflows from wherever in the world. That is one of the reasons that motivated us to design the 2014 stress test, which had the correction of the current account in it.

Q163 Rachel Reeves: Just to follow up on that, one of the questions I asked was about the relative exposure of the UK compared to other countries and

also about infrastructure investment. Perhaps that was covered by the Governor's answer, but I just wanted to check.

Alex Brazier: The relative exposure of the UK and other countries, in itself, is not a concern for the reason that the Governor described, which is that we look not just at the size of their exposures, but also at the quality of their exposures. In some markets, UK banks are a very small segment of the market as a whole and they differ a great deal from the average. We factored in a 15% default rate for the Chinese corporate sector as a whole, akin to lower-grade corporates in the Great Depression, but based on a close analysis of our own banks' books compared to the market average, we did not factor in that for our banks themselves. We thought that was a reasonable assumption. Nevertheless, impairment rates on Hong Kong and China exposures quadrupled in the stress, and that is a big hit to their capital positions and largely explains some of the big differences in the distribution of outcomes of the test.

Q164 Rachel Reeves: Moving on from that, obviously China and emerging markets are identified as risks in your different reports. What is the macro-prudential response to that? Is there anything that we can do as a country, that you can do as the Bank of England, to mitigate against those risks without making us a less open and dynamic economy?

Alex Brazier: Is that for me?

Rachel Reeves: Or the Governor, and I would be interested in the external views on this.

Alex Brazier: Okay, I will go first. There are some risks that we cannot take off the table. They are not within our control, and these fall into that camp. I can trust that with, say, housing market risks and household indebtedness, which we can take some action against. The question therefore is not whether we can mitigate the risks; it is whether we can make the system sufficiently resilient to withstand the risk. If you wanted a characterisation of what macro-prudential policy is about, it is about balancing resilience to the risk environment. You see that in the stress test, where we are ensuring banks are sufficiently well capitalised to withstand the risks that we have identified.

Of course, the banking system is only half the British financial system. That means we have to shift our focus as well not just to banks, but also to the wider financial system. In response to some of these global risks, and we have seen with heightened market volatility, questions about market liquidity come to the fore. Although some of the market price adjustments we have seen are uncomfortable, they are not necessarily unwarranted, and that means that we have to have a serious programme of work underway to build resilience of the markets, as well as banks.

Dr Carney: I will just supplement that, if I may. One of the things we can do and we are doing is to work with the Chinese authorities and work with other emerging markets on a cross-border macro-prudential framework, which is much more consistent with having an open global economy and a reformed international monetary system. We have spent, as a country and as an institution, a fair bit of time on the internationalisation of the renminbi.

That is in the interests of China, it is in the interests of the global economy and progress is being made.

However, as a currency internationalises, capital flows need to be liberalised. They need to be liberalised in the appropriate sequence, and they need to have the right institutional structure, both in the receiving countries and in the sending countries, if you will. In the case of China, the macro-prudential framework still needs to more fully develop. It is a priority in the G20 and something we are working with them on, both as the Bank of England and more broadly as members of the G20.

In terms of the sending countries and more broadly for emerging markets, one of the consequences of the work that we are doing on liquidity and the liquidity of asset managers has the potential consequence, the positive consequence, of ensuring that those institutions can better manage redemptions without promoting fire sales of the underlying assets. That is in the interests absolutely of their investors, first and foremost, so that is good in and of itself, but it has knock-on positive effects for the financial system here, but very much for the receiving countries as well. One of the things that is accelerating or amplifying the current stresses is the structure of the flows that have gone into these economies.

Dame Clara Furse: Just very quickly, as you say, we are a very open economy. In fact, I think we are the most open developed economy in the world, so one of the things the FPC does and needs to continue to do is to remain very alert to the opportunities and risks that that presents and to flag potential risks going forward. That then means that banks will do what they have been doing, which is reducing their loan books in riskier countries. We have seen quite a significant reduction in loan books in a number of the emerging markets, and that is a good thing. It was also very reassuring to see the detail behind the stress test and to see that loan books that our major banks do have are, relatively speaking, high quality.

Q165 Rachel Reeves: Can I just move on to the current account? The current account is also identified by you as a risk. Would you regard it as a growing risk, a declining risk or a stable risk? Then building on from the question that John Mann asked previously, do you think that Brexit would make that more or less of a risk?

Dr Carney: There are some cross-currents, in terms of the riskiness of the current account. First, as measured, it has gone down somewhat. Secondly, the improvement in the European economy should—and I underscore “should”—mean that our net foreign income account element of that current account should improve. As I am sure you are aware, that has been one of the big reasons why it had widened as much as it had. Those are the positives.

The reason why I would not say that the riskiness of the current account has gone down is twofold. The first that we have been discussing is the environment. The general global environment, notwithstanding my comments about Chinese continued interest in making strategic investments abroad, but the general global environment has become much more federal and much more volatile, and relying on the kindness of strangers is not optimal in that type of environment. That is what the case is when you are running a 4-4.5% current

account deficit. Secondly, the possibility of a risk premium being attached to UK assets because of certain developments exists, and that plays into the riskiness of the situation.

Chair: We will have to move on, even though it is extremely interesting. We have been going for nearly two hours and we normally take a break after two hours. With your permission, all four of you, we have three more colleagues who want to come in and maybe we will do those now.

Q166 Chris Philp: Just continuing on the topic of the current account, has any member of the panel taken a look at work by Philip Lane, currently the Governor of the Central Bank of Ireland, but previously Professor of Economics at Trinity College Dublin, who has written a very interesting paper on this topic? Is anyone familiar with that?

Dr Carney: I am familiar with Philip Lane. I probably have not seen the paper.

Q167 Chris Philp: I would honestly recommend the paper. It looks at the causes of the UK current account. In particular, it analyses this primary income point you just talked about. He attributes a significant part of it not just to the dividend point that you mentioned, but actually to large multinational corporates using related party loan instruments as a way of mitigating their corporate tax liability, which leads to the UK subsidiary paying large amounts in interest to the typically low-tax jurisdiction that the related party is in, from whom the loan has been received. This has led to very large or mirror current account surpluses, particularly in Ireland and in Switzerland. I have tried to summarise a very long paper, but could you comment on that?

Dr Carney: It is well summarised. Certainly this type of behaviour, including with the double-dip structures in Ireland and Switzerland, exists, and I would probably include the Netherlands in that. Obviously they exist, and that profit-shifting does exist and that is a factor. The question we have to ask ourselves is if that has materially increased in the last few years. More likely on the primary income side what has happened in the last few years has been that the deterioration on the primary income side has more likely been driven by the lower returns that have come out of foreign jurisdictions relative to the UK, actual returns as opposed to interest. The principal driver of that is likely to be relatively poor performance in the European Union.

Q168 Chris Philp: I know that is the party line but, in terms of the change, until 2012 the primary income was pretty much in surplus every single quarter. From about 2012 onwards, it dipped into deficit.

Dr Carney: I think that proves my point. We can follow up with something written, but the deterioration in European performance, post the 2011 euro crisis, would match that time horizon. That is my first point. The second point is that these types of tax structures you are discussing are important. I am not downplaying them; they are important. It is not clear that there has been a marked acceleration of their usage in the last few years that

would account for two percentage points of GDP deterioration in the current account whereas, given the existing stock of assets—remember that the UK is the largest foreign direct investor in the continent—that is a more plausible explanation.

Q169 Chris Philp: I would be interested to see the more detailed analysis, because Professor Lane seems to attribute the change of what he thinks is 2% of GDP to be caused by these inter-company financings, which would explain the shift. You are right; it is about 2%. Professor Lane attributes it not to the diminution in dividends from European holdings that we have; he attributes it to a change in tax behaviour by multinationals. If you have specific analysis that speaks to that, I would be interested in it. I would certainly recommend reading Professor Lane's paper. It was the last thing he wrote before he transferred to your equivalent job in Dublin. It is definitely worth reading.

Mr Taylor, I am asking this from a national interest perspective. Are you concerned that we are financing this current account deficit by essentially selling assets, hand over fist, whether it is football clubs to the Qataris, Harrods, public utilities or whatever it may be? Are you concerned that, if this continues, in 50 or 100 years' time, we will discover that the entire country is owned by foreigners?

Martin Taylor: Not especially. My colleague Dame Clara said we have a very open economy and you have just given an example of it. I do not see it as selling things as much as it is them buying them. I was going to make another point about the current account deficit.

Q170 Chair: Some might say that is a different part of the same thing.

Martin Taylor: It is indeed, and this comes on the current account and the capital account, really. I am on ground that is really beyond my competence here, as much of the time. There is a tendency to analyse the components of the current account and say that they are real, and the capital account somehow moves as a shadow to accommodate it. Sometimes, it is the other way around. I think that these very large inflows of capital into the UK in the last few years—which the Governor mentioned and also mentioned as being, in a febrile world economy, as he put it, not something to be relied on—have been not only permitting us to have a very large current account deficit, but almost driving it. Sometimes, you go through a period where the capital account tail wags the current account dog.

Q171 Chris Philp: That is a very interesting point and there may be something in that. Do you think that, as a matter of public policy and national interest, there comes a point at which so much of the nation's asset stock, whether that is physical real estate, shares or whatever it may be, is in foreign ownership that it just poses profound questions of national interest and national security even?

Martin Taylor: We do own a lot of foreign assets ourselves, more than almost anybody, I think. We have to be awfully careful if we wanted to stop this. This is beyond the competence of the FPC; this is a matter for Parliament.

Dame Clara Furse: Just to provide a bit of historical context, this is something that has been developing over centuries. As a result of that, we do in the UK tend to be the most international investment community in the world. If you look at the average UK portfolio, the last time I looked, around half of it is invested in overseas equities and overseas assets. That is generally a very good thing. The question about inward investment is whether it is actually investment. In other words, this is money coming into the country to develop the assets that we have and to improve our economic diversity and growth potential. Historically, that has been the case, so I think we should be taking some comfort from that.

Q172 Chris Philp: Investment is more positive than simply the acquisition of assets. For example, people coming in and just buying large chunks of London real estate and doing nothing with it other than collecting rents has less clear value, should I say. My final question on the current account is, bearing in mind we do have this significant deficit across primary income, trade and indeed secondary income, so transfers, and are having to sell large numbers of assets to finance that, would the panel like to comment, therefore, on whether sterling is over-valued, Governor?

Dr Carney: No, I would not like to comment on that.

Chair: Is it under-valued currently?

Chris Philp: Would Dame Clara like to comment on that question?

Dame Clara Furse: No, I think I might demur as well.

Chris Philp: You are all suddenly very shy.

Dame Clara Furse: No, it is sensible, I think.

Q173 Chris Philp: I would like to turn to the property side of your remit, which you refer to in the December report. Could I ask the panel if they are concerned about the fact that the total stock of buy-to-let mortgages has grown 10% year on year whereas owner-occupied mortgages are pretty flat? The number of new originations, so new buy-to-let mortgages being written has jumped an extraordinary 36% year on year, according to the Council of Mortgage Lenders. Governor, perhaps you can be more forthcoming on this question?

Dr Carney: I am happy to answer it. It is straight in the competence of the FPC. We think developments in the buy-to-let market have warranted heightened scrutiny and we have thought so for some time. As a general rule, any time you see a very sharp and sustained increase of activity in one area, particularly that financed with debt, it at least bears heightened scrutiny.

In that respect, we have taken note of a couple of developments. The first is that the PRA has instituted a review of the underwriting standards in the buy-to-let market. That review is ongoing. It will be completed by the time of our next Financial Stability Report. Secondly, the Government, as you would be aware, has instituted a few potentially

material tax changes that will impact the buy-to-let market. We want to assess the implications of those in assessing the overall sustainability of developments in buy to let.

Chris Philp: Mr Taylor, you ran Barclays, I think between 1991 and 1999, if I recall correctly.

Martin Taylor: You are slightly extending my period. I was there in the middle of that period, yes.

Q174 Chris Philp: There we are. I would not be the first Member of Parliament to exaggerate. I notice from the Bank of England's most recent report that default rates in buy-to-let mortgages are running at about twice the level of default rates of owner-occupier mortgages. Does that concern you and do you think that that is an area that the FPC should be focusing on?

Martin Taylor: It is evident to a close reader of our report and our record, as you clearly are, Mr Philp, that we are expressing mild concern about buy to let. We note that it has different characteristics from owner-occupied. We do not understand its characteristics quite so well, because it has not been going so long. We do not have the historical data.

Q175 Chris Philp: Am I right in saying that it is about half of all mortgage stock?

Martin Taylor: It is about half the current flow of mortgage stock.

Dr Carney: It is 18%.

Chris Philp: It is 18% of total mortgage stock and 50% of current new originations.

Martin Taylor: Correct, that is roughly right, yes.

Dr Carney: I would stick with the 18% of the stock and a material proportion of the growth.

Q176 Chris Philp: It is a lot more than 18% of new originations, so its share is growing.

Martin Taylor: Its share is growing and the banks seem to have been dashing into it. We have been expressing concerns about it for a while. From a banking point of view, it is a different product from an owner-occupied mortgage. It is not subject to the MMR; it is an unregulated product, but we are looking at it carefully.

The most important thing to understand first of all, as the Governor said, is what is happening to underwriting standards among the banks. Are they deteriorating? We would be concerned if we saw underwriting standards deteriorating, and we await with interest the PRA's work on this. Second, we are trying to understand what reaction the two tax changes—the relatively minor one on stamp duty and the important one on income tax—

are likely to have on this market. It may be they will cool the market without any need for any macro-prudential intervention.

Q177 Chris Philp: Again, sorry to keep asking you the questions, but you used to run a major bank. Would you agree that, if there are two people trying to buy the same property, one a prospective owner occupier and one a prospective buy-to-let landlord, it is easier for the buy-to-let landlord to obtain a mortgage for two reasons? First, they are not subject to any personal income test. They only have to earn £25,000 a year. Secondly, they can typically get an interest-only mortgage, whereas the prospective owner occupier would have to get a repayment mortgage and therefore have higher repayments, which look less affordable and of course are subject to the quite strict income and affordability tests. Would you say that that asymmetry is a bit illogical, anomalous and might be corrected?

Martin Taylor: If I may, I think you slightly exaggerate the asymmetry, because the buy-to-let buyer would have to put up a bigger deposit certainly than the owner occupier would. All that being said and all else being equal, I would agree with you that the buy-to-let buyer does seem to have an advantage in simply executing the transaction.

Q178 Chris Philp: Governor, given that this favouritism apparently exists and you are concerned about the growth of buy to let, firstly, why have you not used your powers of recommendation in this area so far? Secondly, can you update the Committee on when you are going to get powers of direction, which we have talked about twice? This is the third time I have discussed this with you and I have only been a Member of Parliament for six months. I understand that there is some consultation ongoing, unbelievably. When is that going to end and do you believe that you should have those powers of direction? If you had them, how would you use them?

Dr Carney: I believe that the last question is a question I should be asking you, as a Member of Parliament, because it is a parliamentary decision. The consultation is underway.

Q179 Chris Philp: When does it finish?

Dr Carney: I believe it finishes at the end of March.

Q180 Chris Philp: You have said that you want these powers, presumably.

Dr Carney: Yes.

Chris Philp: Good, I fully support that.

Dr Carney: We do appreciate it. There is no specific move here, but the issue is that, if we determine that action should be taken on buy to let, just as it indicates where we felt

action should be taken on owner-occupied, it is far better to take action instantaneously. Make a decision and take action, via a direction, which we can do. From a governance perspective, it is far better to have the accountability framework, which comes from having to do cost/benefit.

Chair: We are moving on. We really are. As it happens, I am very interested in this subject indeed, so I am loathe to move on, but we really have to. We have two more colleagues to get in and we have already been running for nearly two and a quarter hours. Mark Garnier and then Wes Streeting. I do apologise to Chris.

Q181 Mark Garnier: It sounds like the Chairman is about to become a buy-to-let landlord. Dame Clara Furse and Alex Brazier, can I talk about the issue of financial markets and liquidity within those financial markets, and in particular the confusion that is thrown up by some of these black box trading models? In particular, they strike me as being two very different types, one of which is the black box, where you are using Bayesian probability to run an automatic portfolio management system as a proprietary or on behalf of a fund. Nonetheless, it is making its own decisions. The second is algorithmic trading, where you are trying to seek volume-weighted average price and trade-weighted average price. It is that execution type of algorithmic trading.

We have seen, over the last months and years, a number of different factors coming in, where these black boxes have created flash crashes. They have created various problems and then, on top of that, you have seen where the automatic cut-out cuts in, they are disconnected from the market and you have a consequential catastrophic drop in liquidity, thereby exasperating some of these problems. Having started the cycle, they then do not finish it and market movement cuts in. We have seen in America that the SEC is looking to examine how to regulate these types of activities. Are we doing enough in the UK in terms of regulating computer-based trading systems?

Dame Clara Furse: This is obviously a very interesting subject. Just to create a bit of context, clearly we have had a period of increasing electronification of markets and the development of technology to improve access to markets, and that is a good thing, because it reduces transaction costs and means you are more likely to get a trade execution done. Speed to market has obviously been a key driver of efficiency. That has then led to the development of algorithms that just make that access to market more certain, or in theory more certain, and black boxes and all sorts of other mechanisms that ensure that you can actually execute what might be a complex portfolio trade. That is not necessarily a bad thing; in fact, you can argue that it is a very good thing.

The problem arises when you have lots of interconnections between markets and when you have activities that knit several liquidity pools together. In equity markets, you have a variety of liquidity pools and, without the activity of the high-frequency traders, you would not have a single virtual liquidity pool in which you could find the price of an equity. There is value to be had there. The downside is that, when markets become very difficult indeed, what you have to do is ensure that your trading systems are not exacerbating the problem. What we have seen in the last few years is algorithms being switched off when markets become very difficult, but actually that is no different from a human trader, standing in a pit,

removing himself and stopping to trade when something chaotic appears to be happening in markets.

What is important going forward is that regulators and certainly exchanges are very clear about the regulatory parameters that they put around ensuring that the development of these electronic trading tools is well managed and the risk associated with them is well understood.

Q182 Mark Garnier: By whom?

Dame Clara Furse: By the software engineers, I guess, who create and build the algorithms. Regulators are increasingly involved. It is one of the discussions taking place in Europe. It is a very live discussion.

Q183 Mark Garnier: Do you think that is good enough? If you are a software engineer who is coming up with these—let us take VWAP and TWAP, volume-weighted average price and trade-weighted average price—those are actually very sensible measures that were introduced in order to try to make sure that you get best execution for pension funds, for example. Where you are moving any number of shares, you want to do well by those shareholders. If you are a software engineer and you are trying to achieve that, what used to be a centralised dealer handing an order out on the basis of executing once every five minutes and all that type of stuff then morphs into something where it becomes slightly more imaginative. It sort of says, “If it’s drifting in one direction, you can take your foot of the gas.” This is the machine doing it itself: take your foot of the gas and not put too much trade on at that particular time, and ease it back.

Presumably if you have a very clever software engineer, that software engineer will come up with more ways of trying to be clever that the regulator could easily start seeing as market abuse, because now it is trying not only to predict what the market is going to do, which of course is impossible, as we know, with any surety, but actually is now trying to influence what the market is doing by putting in transactions that are going to increase volumes at a certain part of the day in order to meet the volume-weighted average price, for example. How can a software engineer be that smart when it comes to the regulation of these grey areas? How can a regulator be that smart when it comes to the software that is driving these algorithms?

Dame Clara Furse: “Software engineer” is probably not the right term.

Q184 Chair: Could you tell us what the right term is? I am sorry to interrupt, but this is crucial. You were basically saying that the software engineers were responsible.

Dame Clara Furse: An algorithm is essentially a series of instructions to achieve a specific end.

Q185 Mark Garnier: It does not have the wisdom of human intervention. It is pre-written rules by a human.

Dame Clara Furse: Yes, they are pre-written rules.

Q186 Mark Garnier: It is interesting, getting back to your analogy about a floor trader removing themselves from the pit. That is absolutely right, but they will be doing it on judgment, based on what they know about the market, which is not pre-determined rules, but a much more dynamic decision-making process than a computer program would have.

Dame Clara Furse: No, because there are humans behind every algorithm. They are not just allowing the algorithms to create the market. The point around electronic trading, if I can just finish, is that you also have a very clear audit trail, so you know exactly what is happening all of the time. It is actually relatively easy to govern. It also reduces the risk of manual trading error. I am just trying to create a sense of balance around this, because it is all too easy to say that this is a bad thing.

What is problematic is that, in interconnected markets that then become turbulent, you then get a potential for that turbulence to transmit itself extremely quickly to other markets, so it is potentially more pro-cyclical, I guess. That does not stop the human beings behind the trading, behind the algorithms, from making the decisions that they need to make.

Q187 Mark Garnier: I just want to pick you up on this point about humans telling these algorithms what to do. To use an example, we have seen huge amounts of progress in driverless cars. The programs make complicated decisions about making sure that we do not have a crash. If somebody steps out of the kerb, you stop or avoid them, as I understand it having read about this, not in depth but loosely. It is that incredibly difficult that is very difficult to pre-program. When you have a pair of pensioners who walk off the road and your only available escape route is a crocodile of schoolchildren going to work, only a human can make that split-second decision. They would probably get it wrong, but programming a computer to decide whether to run over a couple of pensioners or a crocodile of schoolchildren is impossible to do. It is completely impossible. I used hyperbole to illustrate the point but, Governor, you clearly want to leap in at this point.

Dr Carney: This was not in my briefing. I will just make two quick points, first on this interaction between the human and the electronic and, I would suggest, between the lit and the dark markets is another way to put it. What we have seen, and one of the things we are beginning to look into as part of the broader exploration of market liquidity, is exactly these types of dynamics, as was referenced in my letter to you, Chairman. What we saw in the Bund angst, the taper tantrum and other jump-to-illiquidity events, in the most liquid markets in the world, is that the lit and the cash side just shut down and the electronic took over.

The behaviour of some of these algorithms and the jump in cancelled trades, in the Bund angst, was above 99% of the trades that in milliseconds or nanoseconds are put in and cancelled before they go through, in a way in which the feedback loop may be promoting the momentum that gets established. It gets established to enough of an extent that the cash or lit side, the human side, steps back understandably and the algorithms have to run their course with quite dramatic moves. They were outside of any historic experience of the jumps in both the treasury market and the Bund market, at that time. That is something that the collective we need to understand much better. There is some urgency to understand to what extent that could be moderated.

In both of those cases—and I will finish with this—ultimately, by the end of the day, the market returned to normal. Ultimately the access of the underlying sovereign to financing was not impaired, but it is certainly a far from optimal way for the market to function.

Alex Brazier: If I may just make one additional point there, the report contains a box on page 50—something looking in depth at the Swiss franc episode. This shows that this is an increasing area of focus for us, both from the micro-prudential perspective and from the macro-prudential perspective, in terms of market behaviour. On the micro-prudential side, in looking closely at banks' own algo-trading operations, it became clear that the risk management structures they had around them were not entirely fit for purpose, for the reason that the algos could not deal with the crocodile of schoolchildren and the old couple that you described. In response to that, supervisors are taking serious action with firms that have these operations to bring their risk management and other infrastructures up to pace with the development of their trading operation.

Q188 Mark Garnier: Do you think that the managers of these banks or these securities firms who are running these things fully understand the potential problems with them, or do you think that there is an education piece that needs to be done?

Alex Brazier: I think two things. One is that, in that case, it became clear to us that some managers did not understand the risks that their own firms were taking. That has to change under supervisory guidance. The second issue is if we collectively understand the way that system dynamics will change as a result of this. This goes to the heart of some of the things that the Governor was saying. That is a serious piece of work that we have ongoing at the minute, because although the episodes that the Governor described have been short-lived to date, and the corrections abrupt but not systemic, we cannot guarantee that for the future. As part of our market liquidity work, this is really serious, this is one of three aspects to it: this, the fast markets aspect; the mutual funds work the Governor described; and the role of dealers and market makers as well.

Q189 Mark Garnier: Can I ask just one last question, on a slightly different subject, Governor, if I can address this to you? As you know, one of the things that preoccupies us in this place and in the media, ferociously, is speculation about who is going to be appointed to various jobs. We have been speculating fiercely for the last few weeks about who is going to run the FCA. Thank you, collectively, for giving us another task to do in terms of speculating about who is

going to run the PRA. Can you give us a clue as to who the runners and riders might be, and if it is going to be internal or external?

Dr Carney: I cannot give you a clue, because I do not know myself. It is going to be an open competition. There are a number of people who could do the job and I hope they will apply. I would just underscore what I said at the start, which is that one of the many things that Andrew Bailey did at the PRA was to build a true team, an exceptional bench of talent. We will benefit from that and his successor will as well.

Q190 Mark Garnier: It sounds like you are suggesting that he has been very good at succession planning, thereby giving us a clue that it could be an internal.

Dr Carney: I am not trying to give you a steer either way, at all. There are a range of people who could do the job.

Q191 Wes Streeting: I want to ask some questions about the eurozone but, before I do, I would like to just pick up on another issue that has focused the Committee's mind recently, around the extent to which the Treasury has been leaning on bank regulation. Governor, are you aware of any instances where HMT has lobbied the Bank about the implications of specific regulations for specific banks?

Dr Carney: I am not aware of any specific instances, no.

Wes Streeting: You have never felt leant on by the Treasury, in terms of banking regulation.

Dr Carney: No, and it would not make a difference if they tried.

Q192 Wes Streeting: That is very reassuring. We will go on to the eurozone. How concerned is the FPC about the outcomes of the elections in Spain and Portugal, given the relative instability of the Governments that have arisen?

Dr Carney: It is an important question. What you see with the report is that, in general, we felt as a committee that the biggest risks to UK financial stability had rotated from advanced to emerging economies, the biggest macroeconomic risk. Notwithstanding political developments on the continent, actual or prospective, I think that that is still the case; in other words, the core risks are through the channels that we have been discussing this morning, including with Ms Reeves.

Q193 Wes Streeting: Thinking about the ability of the eurozone's policy framework to deal with troubled banks, take the Italian case, where they are still struggling to gain European approval for how they are going to deal with the bad debts held by banks, muddling through some of their bank restructuring. Are you concerned that the eurozone's policy framework for dealing with troubled banks is

still not up to scratch and, if so, can you identify areas where you think there need to be improvements?

Dr Carney: One of the challenges is that the effectiveness of the BRRD, the framework for restructuring institutions, is in part dependent on the existing capital structure of the banks themselves. I alluded to it a bit earlier in terms of systemic banks; the debt is still not in the right place. It is not at the right level of seniority or it is not at the right institution. If that is the case, then it is much harder to restructure banks under European law, because of course it is now the law, as of 1 January, as you are familiar. That is a challenge.

The second thing is on these questions about the appropriate level of national discretion around supervisory discretion for institutions, when that resides with the SSM and when it resides with the national authority. European authorities are in the process of clarifying that. It is not an issue in the UK, because it is clear where that authority lies. It lies with the PRA.

Q194 Wes Streeting: I am conscious of time, so I will just ask about one final issue, which is around the use of negative interest rates in Europe. Thinking about the examples that you have looked at, have either the MPC or the FPC gathered any useful information on how adopting negative interest rates would affect the UK banking system, if we adopted that approach here?

Dr Carney: What we have done as the MPC, informed by the PRA, is to think more carefully about where the effective lower band is for interest rates. Back in 2009-10, the MPC stopped at 0.5% and then began to purchase assets because, at the time, the feeling was that, given the balance sheets, particularly building societies', lower interest rates would be counter-productive. It would undercut the capital position of building societies and further restrict access to credit. A more effective way to provide that stimulus was through asset purchases.

In the intervening years, building societies have, by and large, rebuilt their capital positions. We gave a judgment, as the MPC in the past year, that we felt that we could, if necessary, go below that 0.5% towards zero. We did not give a judgment that we felt that it would be appropriate or productive to go negative, given the importance of building societies to this financial system and the economy, and given the capital position. Now, that is something that we have to constantly keep under review. The reason I give all of that background is that the actual question of negative interest rates and the impact on the financial system, for the FPC, has not arisen, because we do not think that that is the prospect.

If I can finish with one last point, it is that one of the things that is relatively unique about the UK retail banking system is that the net interest margins of the banks have held up, despite the reductions of interest rates. It is because the lower interest rates are being passed on, both to borrowers and to depositors, in tandem. It is not great for savers clearly but, in terms of the banks, they have been able to rebuild their capital position more readily than some banks on the continent.

Q195 Wes Streeting: Thank you. Just for one of our viewers online, have you seen *The Big Short* and do you have any plans to see it?

Dr Carney: I feel like I lived it. I have not seen it, but I am sure I will.

Wes Streeting: Maybe send us a review.

Martin Taylor: I went to the London premiere. It was terrific.

Q196 Mr Baker: Sorry to ask a serious question after that, but when Mr Philp asked you about the current account, you raised the issue, Dame Clara, about the purpose to which capital inflows are put and the extent to which they went on productive asset development. Are you concerned, as I am, that with a total financing requirement of about £128 billion, most of which will be spent on current consumption by Government, there is potentially a real problem that too much money flows into the country to be spent on present consumption and not asset development?

Dame Clara Furse: Of course it is a risk, but that is not what we are seeing. What are you specifically concerned about?

Q197 Mr Baker: That total financing requirement is 6% of GDP and I think it is a concern that that much is still being spent on present consumption, overwhelmingly, by Government.

Dr Carney: I will make a general point, very quickly. If you have a large current account deficit, as we do, all things being equal, the optimal policy mix, in my opinion, would be towards fiscal consolidation, so a tightening of fiscal policy and reducing that requirement; monetary policy consistent with the inflation target but, *ceteris paribus*, all things equal, it would be looser; and an active macro-prudential policy would be necessary in order to address some of those tail risks. I believe that that accurately describes the overall stance of policy. Now, all of those policies have to be implemented and the devil is in the detail and important decisions at the margin, but the general orientation of policy is consistent with addressing some of the issues you raised.

Chair: Thank you very much, all four of you, for coming in to give evidence today. It has been a longer session, two and a half hours, and we apologise for that, but we thought it was better to continue. We have learned quite a lot, picked up quite a lot and we are extremely grateful.