

# Treasury Committee

Oral evidence: [Spring Budget 2020](#), HC 214

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Members present: Mel Stride (Chair); Harriett Baldwin; Anthony Browne; Felicity Buchan; Ms Angela Eagle; Liz Kendall; Alison Thewliss.

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## Witnesses

I: Robert Chote, Chairman, Office for Budget Responsibility; Andy King, Member of Budget Responsibility Committee, Office for Budget Responsibility; Professor Sir Charles Bean, Member of Budget Responsibility Committee, Office for Budget Responsibility.



## Examination of witnesses

Witnesses: Robert Chote, Andy King and Professor Sir Charles Bean.

Q1 **Chair:** Good morning, everybody. Welcome to the Treasury Committee's evidence session on the Spring Budget 2020. Can I welcome you to the Committee this morning? Thank you for coming. Can I ask you to introduce yourselves for the record, please, starting with Professor Sir Charles Bean?

**Professor Sir Charles Bean:** I am Professor Sir Charlie Bean. I am from the London School of Economics and am an economic expert on the OBR.

**Robert Chote:** I am Robert Chote, chair of the OBR.

**Andy King:** I am Andy King, from the fiscal side of the committee at the OBR.

Q2 **Chair:** Thank you very much and welcome. I am going to start by asking the question that all my predecessors have asked of you, Mr Chote. Have you come under any pressure from Government officials to alter your forecast?

**Robert Chote:** No.

Q3 **Chair:** Thank you very much for confirming that. On the forecast, clearly through no fault of the OBR whatsoever, we are now in very different territory to that we were in at the time you forecast your numbers. Perhaps, Mr Chote, I could ask whether you feel that, nonetheless, there is still some value in the forecast. If so, what is it? Could I also ask what forecasting we might consider doing now, given the crisis we appear to be in at the moment?

**Robert Chote:** Clearly, the forecast is no longer central. We closed the economic and fiscal elements of this in mid-February, as is normally the case for the timetable here, at which stage it appeared as though the coronavirus was going to be largely confined to China. We had a modest effect on world trade and world GDP growth and some impact on export markets, but clearly things have moved on enormously. The economy is probably shrinking as we speak, and that will have obvious consequences for the public finances.

If there is value in the numbers, it is in the sense that we do not know how long this crisis is going to be sustained in its impact on the economy and the public finances, but the hope is—and a lot of policy action is aimed at trying to make sure of this—that it is temporary. Therefore, there is some value in having some sense of what the underlying baseline was and what decisions the Government chose to take against that pre-measures baseline.

Clearly, the strategic judgment here, partly reflecting a trend in recent fiscal events, is to move away from aiming for a balanced budget in the medium term to being happy to borrow on an ongoing basis to stabilise



public sector debt as a share of GDP. You would expect the crisis to have a hopefully temporary large impact on the budget deficit and to ratchet up further the level of public sector debt. It will then be for the Government to decide, once one has a clearer view of how things will look as we come out of this, what sensible flow targets look like and what the objectives should be for dealing with the new debt situation that comes out of that.

Clearly, the priority at the moment is not to worry about dotting the Is or crossing the Ts of fiscal rules but to do what is necessary for the economy and for the public. If there is a value in it, it is in terms of how you manage the public finances in normal times in order to be able to deal with shocks like this, albeit that this one is very extreme and unusual.

**Q4 Chair:** Part of my question was about what the potential role is for forecasting at the moment. As a forecaster—that is what you do day in and day out—should you have a role?

**Robert Chote:** We have a particular role, which is that we produce forecasts to inform fiscal events. In that sense, there are plenty of people out there providing regular forecasts of what is going to happen to the economy. The reason for having another one of this sort doing it is the particular role we have in forecasting around the public finances. In a situation like the one we have at the moment, the clear priority is to take the fiscal policy measures you think are necessary. Whether those are accompanied by a forecast or not should clearly not get in the way of doing what you think is the right thing at any given moment.

In practice, the value-add of trying to do another forecast in a month's time is virtually nil. We are not going to be any the wiser about how deep or how long this is going to be. In that sense, I do not think much useful purpose would be served by it from the particular perspective we have.

**Q5 Chair:** Could I ask Sir Charles or Andy King whether you have anything to add on forecasting?

**Professor Sir Charles Bean:** That is a very good summary of where we are. It is such a fast-moving situation, not only in the health sphere but also in the economic sphere, that the notion that an economic forecast is going to tell you anything very useful about the next year or two is pie in the sky. Nevertheless, there may be some use in the forecasts we have produced to accompany the Budget, which, as Robert says, was conditioned on a SARS-like event. It still may be useful for thinking about some of the longer-term aspects of the Government's fiscal strategy.

**Andy King:** I would just add one thing from my experience of being a Treasury economic forecaster in 2008 and 2009. One part of what is happening now is very reminiscent of that, in that there is so much information arriving every day. You can see that in the stock market moving as they try to process that information. Back in 2008, we were



essentially providing Ministers with a running commentary of scenarios. They were not really forecasts, but we were trying to keep up with the information. We started by giving these scenarios adjectival names, and we ended up just giving them the dates, because we had to update them so often because there was so much we were learning all the time.

That running commentary would not have value in terms of us trying to provide the conditioning assumptions for a fiscal event, but Ministers will obviously be seeking information about how deep, how long and the various possibilities in real time.

**Q6 Chair:** Thank you. We will move on now to coronavirus and the critical moments we are in in terms of what the Government's best response should be for individuals, families, public services and, very importantly, businesses. President Macron has said that he will guarantee that no business affected will go under as a consequence of coronavirus in France. My question to you is, first, whether that a credible statement. Secondly, to the extent that it is a credible statement, what is the best way of achieving that?

**Professor Sir Charles Bean:** It is certainly a sensible objective. The nature of the shock here is a very deep but potentially transitory shock to supply and demand at the same time, but one that you hope will unwind as soon as the health aspects have been dealt with.

In terms of the key policy objectives, the short-term disruption is inevitable. One cannot think about avoiding it with conventional macro demand-management tools. The key objective should be to make sure that the downturn now does not have lasting adverse effects on the supply side of the economy. Essentially, that means you do not want basically sound businesses to go bust and you do not want people to be forced to sell their homes because they do not have money and so forth.

The sorts of policies the Chancellor and the Bank of England announced last week are mostly in the right direction. I have to say I do not see the bank rate cut as being a particularly key ingredient, because monetary policy works by pulling demand forward, and that is not particularly what you are trying to achieve here. The other aspects of the Bank's package—the term funding scheme and the relaxation of the countercyclical buffers—are directed towards making sure the banks are in a position to keep lending. That is all sensible. We then have had things like the action on being able to get sick pay more quickly and the guarantees for small-business loans that the Government were offering and so forth.

They are all in the right space, but things have moved on a lot even in a week, and there is a question over whether the scale is appropriate. The issue for a lot of businesses is that there may be some of their costs that they can reduce quite quickly—you can send staff home and ask them to take, essentially, long unpaid holidays—but lots of businesses have fixed costs that they cannot do much about. I would guess that a lot of the



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airlines' aircraft would be on leases or, if they own them, they will have very big debts that they used to buy them, which have to be serviced.

There is a very good argument that the state should essentially be the insurer here. I have heard quite a lot of discussion on the radio programmes today and yesterday about wanting the Government to mandate bars and restaurants to close so that people can claim against their insurance policies. We seem to forget that insurers have limited pockets. You are talking about such a deep and widespread downturn here that all you are doing is passing the problem on to an insurer, who potentially may not be able to pay. This is a sort of AIG-type equivalent in the financial crisis.

To me, this is exactly a case where the state should be stepping in to try to implement things that, as I say, minimise unnecessary damage to the supply side. The question of how you do that—and you have to do it quite quickly, ideally—is a much harder one, but you can at least start by agreeing what the objective is. You should not be overly concerned about saying, “Are we spending a few extra billion here? Is there a way we can squeeze that down?” In the long run, that is counterproductive. If you damage the supply side of the economy, you damage the public finances further down the road. All the evidence we have from the financial crisis and things like this suggests that big, early action is better than half-hearted action or delay.

**Q7 Chair:** I will bring you in in a second, but what you are essentially saying, Sir Charles, which is absolutely right, is that we need something big and we need it soon. You are toying with what that looks like. Does anybody on the panel have something to add as to what the state intervening, as you may have termed it, looks like? What does it mean to stop airlines, leisure companies and other businesses, particularly those particularly affected, from going under?

**Robert Chote:** As Charlie says, the state is operating on a number of different fronts here. There is the question, as he says, of the priority of focusing on vulnerable people and vulnerable businesses through the course of this. That is absolutely key.

Normally in a recession you would be worried about the long-term effects, for example, of unemployment going up, people being detached from the labour market and a hysteresis effect of that sort. In this situation, your hysteresis concern is more that people are not working and they do not have a firm or an employer to go back to. That would be the justification for the sort of intervention that you would not normally undertake.

**Q8 Chair:** You are absolutely right. We want to avoid scarring the economy through various effects, and we know we have to step in to keep otherwise viable businesses going through this crunch, but what does it look like? What should the Chancellor be announcing, perhaps as early as this afternoon, that will make businesses that are currently saying, “It is



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helpful, but it is not going to be enough”, say, “Do you know what? This is being really gripped now, and we are getting some confidence that we can get through this in the way they are suggesting we should try to”.

**Robert Chote:** I should formally preface this by saying that you, as Parliament, have told us not to give policy advice, but we are under unusual circumstances here, so we are being a bit more relaxed.

**Chair:** I am sorry. It might be a question for your fellow panellists.

**Robert Chote:** Clearly, there is a range of options on the tax front. You have heard people talking about options on business rates and national insurance contributions for small firms. If it gets sufficiently serious, it is basically the question of getting money to people as quickly as you can by whatever form you can. As you heard in your evidence sessions yesterday, there are different constraints in different countries as to how easy that is to achieve.

The other sort of intervention you may be seeing at the moment is going around and saying, “Can anybody make ventilators?” In some ways, this is more like a wartime policy challenge of also wanting to direct production. There may also be that element.

Q9 **Chair:** It may have been an unfair question to have asked you. Andy, did you have something you wanted to add?

**Andy King:** Thinking back 12 years, the temptation to try to work out which bits of the economy are going to be hurt is obviously very great. It is entirely natural that the first thing to look at was small business, retail and so on. However, these things ripple through the economy incredibly quickly. The experience back then was about whether it could be confined to the banking sector and the manufacturing sector as world trade was hit. The answer was very quickly no.

In essence, the policy task here is to fill a fairly large hole in the economy for a temporary period. In filling the hole, you bridge to the other side. Again, thinking about your discussion yesterday, Torsten was the special advisor I was providing the running commentary to. The thing that really got to him at that time was that there was no mechanism for mailing cheques out. There was a mechanism in the US. They had just done it, and we were unable to follow suit. How it is delivered requires the expertise of many, but the objective is, in some senses, simple.

Q10 **Harriet Baldwin:** I just wanted to pick up on your point, Sir Charles, about the role of the insurance industry here. There will be a lot of businesses that have taken out business interruption insurance. If they then try to wriggle out of paying out on those policies because coronavirus was not an identified condition and the state steps in and effectively becomes an insurer of last resort, the insurance industry is going to completely undermine its *raison d’être*. Therefore, it would not be in their long-term interest to wriggle out. Insurers need to do the responsible thing here and pay out on business interruption insurance,



even though this is a completely unforeseen event.

**Professor Sir Charles Bean:** I do not have any disagreement that insurers should step up to their obligations, but there is a question about whether we should rely purely on privately provided insurance, because some businesses and some people will have it and some will not. As I say, there may be a question in some cases as to whether the insurers have deep enough pockets to be able to pay out. This is why, in some senses, you need the state to be there as the insurer of last resort against what is essentially an act of god.

You could say that you could foresee that there might be a pandemic at some time—we have actually talked about doing it as one of our risks in the *Fiscal Risks Report*—but the way it actually appears to be panning out raises questions about whether you can rely just on whatever there might be in the way of insurance that has already been taken out from the private sector. The state surely has to have a role there.

Q11 **Ms Eagle:** I wonder whether you think the quite slow response to the pandemic in this country compared to other countries was about trying to save the economy and keep the economy working, whereas what has happened is that it has maybe put us in greater peril.

**Robert Chote:** I would like to believe that the Government were taking the best scientific advice they have available. The challenges of making decisions on the right thing to do in that are difficult for professionals in that field, as we have difficult choices to make but ours are nowhere near as consequential for human welfare. I would not want to suggest the Government were not doing what they feel best. With hindsight it may turn out to have been the right or the wrong thing, but I am not going to chuck any stones at this point in the proceedings.

Q12 **Ms Eagle:** Not closing the economy down and not asking people to stay home was perhaps hoping that the economy could be kept going and that the effects of coronavirus could be minimised, but it has now become clear from even the scientific modelling that social distancing and potentially even shutdown, as we have seen happen in other European countries, is the right effect. Perhaps they did the wrong thing for reasonable purposes, but the paradox is that it might end up causing more damage because it makes the outbreak more severe.

**Professor Sir Charles Bean:** There is an issue about timing. When the Government originally announced its graduated plan, it recognised that we might need to go into the sorts of situation we are just entering at some stage. There is a question here: do you go into that straightaway?

Q13 **Ms Eagle:** And, of course, how do you get out of it once you are in it?

**Professor Sir Charles Bean:** Yes. There is clearly quite a legitimate concern amongst medical professionals here. They say, “Okay, we may be able to stamp down on it now, but, if we get to the summer and it



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looks like it has all gone quiet and we relieve the constraints, it could come back in the autumn, potentially as a more virulent strain”.

I am not an epidemiologist, so I should not be commenting on what the best approach is to take in terms of timing, but it surely is sensible to make sure you introduce interventions at a time when you think they will be most effective. If you introduce them too early and people think, “What is the fuss?” they stop taking any notice of the restrictions and so forth.

**Ms Eagle:** Was the £12 billion of extra support a good down payment but now we need very much more very quickly in order to prevent what the Chair has called the “scarring” of the economy, especially as the Government have now sensibly suggested that people stay home? Oddly, they have suggested that people do not go to theatres, clubs and bars but have not ordered those theatres, clubs and bars to close. Surely we have to compensate all of those businesses for what will be the desertion of their services by Government suggestion. Surely, if we want to have theatres, pubs and bars to survive however long this outbreak or this shutdown carries on, we need to give them some comfort that they will be looked after.

**Robert Chote:** Clearly, the situation has moved on even in the few days since that Budget announcement. The Chancellor was clear, for example, on the NHS, and in a sense over the broader public services, that you spend what you need to at this point. As you say, one regards the £12 billion as being a down payment.

We are going to be going through this for some time, and the idea of what needs to be done and how expensive it is going to be is going to change on an almost daily basis, but, given our job, it is no abdication of budget responsibility to be spending what you need to spend to deal with this in the best way. As I say, in some ways it is like a wartime situation. During the second world war, we ran budget deficits in excess of 20% of GDP five years on the trot, and that was the right thing to do at that time.

**Ms Eagle:** In fact, I was a Treasury Minister when we finally repaid that debt. We had a little celebration about that when it happened.

**Robert Chote:** Having taken that responsible decision in office, we are ready for the need to put that up again, as we need to. Olivier Blanchard, the economist, was pointing out this wartime comparison. He said that now is “not a time to be squeamish about public sector debt”. There will be a time to think about what the appropriate medium-term policy-setting is for normal times to deal with the legacy of this, but, for the moment, you are dealing with the problem on a daily basis. As I say, £12 billion was a number that seemed perfectly reasonable as part of a perfectly reasonable package at that time, but it is moving by the day.

Q14 **Ms Eagle:** Professor Bean—given that Robert cannot give us policy



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advice—what would you like to be seeing for individuals in the Chancellor’s announcements to come, given that we already have an issue about the level and coverage of statutory sick pay and given what we have seen other countries do, which is get money to people who have had their income cut as quickly as possible and as simply as possible?

**Professor Sir Charles Bean:** Yes, that is exactly what you want to do. In particular, this is about people who do not have savings. It does not matter for me that I am stuck at home and so forth. I can work quite happily from home, and I have savings I can draw on, but there will surely be people working in the gig economy and in low-paid jobs who are laid off, and it is crucial that somehow or other their incomes are made up. As I say, you are equally looking to ensure that businesses do not end up going to the wall simply because of a catastrophic fall-off in their revenues, which we know will come back in the future, but you need that bridge to get through that period.

The key has to be to find ways to get money to the most exposed parts of the household sector and the most exposed parts of the business sector. I would say here—this goes to what Andy said earlier on—that what is important is that you do not spoil the ship for a ha’porth of tar. If you worry, “Can we slightly reduce our spending here?” you might end up missing important parts of the economy. It is better to end up spending a little bit too much here than not doing enough, in my humble opinion.

Q15 **Ms Eagle:** Andy, you were talking about what Torsten said yesterday and about his surprise that there was no mechanism for getting money quickly to people in a crisis of this kind. Are you surprised that 12 years later there still is not one?

**Andy King:** I am not sure whether I am surprised or not.

Q16 **Ms Eagle:** Are you worried?

**Andy King:** There are very many mechanisms for getting money to people. In essence, this is about filling a hole in the economy so that people can get to the other side. What you are seeing around the world is people thinking about ways of doing that. This might be paying people’s utility bills or meeting their council tax bills. These are the kinds of things that will come up. People will think of more and more ways of doing this. Part of the logic of the initial business rates grant measure was that it was enough to pay small firms’ rent for three months. That is precisely about getting through a hole in the economy, where you do not have revenues.

There will be many more ways that people think of meeting those needs. They are not obvious on day one, but they become more obvious on day two. The announcements will inevitably continue, as we learn more about where it is really most challenging. Torsten was talking a lot about statutory sick pay not being very much.

Q17 **Ms Eagle:** We want people to do the right thing and stay home. If they



do not, it will have a material effect on spread.

**Andy King:** Exactly. There are ways of increasing the amounts that go through existing systems. Universal credit has a day-one advance. That is a parameter that is already in the computer system. You can change that much more easily than some of the other ideas that people have, which is echoing Torsten's point.

Q18 **Felicity Buchan:** It seems to me that what is key here is keeping this as a temporary shock and not having long-term structural effects on the economy. If we can look at the three sectors of large-cap businesses, SMEs and individuals, how can we keep this simply a temporary shock in those three different sectors?

**Professor Sir Charles Bean:** This is where you get into issues of precise policy design. I have not been sitting there working on these problems.

Q19 **Chair:** Can I just say something to all three of you? This is the most valuable part of what you can contribute, even though you may be chancing your arm a bit because you are not familiar with every aspect of it. We want to draw out of you what the Government should do.

**Professor Sir Charles Bean:** At this stage, I am metaphorically going to take my OBR hat off and put my LSE crazy-academic hat on. Thinking about large-cap businesses, in principle you could say with businesses in general that what you want to do is fill in their missing revenue stream. In principle, you could imagine a setup where you say, "What was your revenue over the last year? We will fill in any shortfall over this coming year". Hopefully the business will then be able to borrow from a bank on the security of that promise that their revenues will be made up to whatever they were last year. That might be one option.

Where you have quarterly taxpayers, there may be scope to be doing it quite effectively through the tax system. It is harder if it is on an annual cycle, because the business would have to be borrowing for longer.

It is probably not sensible to be thinking about this in terms of specific programmes for given industries. We have mentioned airlines, and they are an obvious one. There is obviously a lot of pressure for something to help the airline industry at the moment, but it is better to try to think of something that is a general approach that is applicable for all businesses rather than saying, "Here is something for the airlines", and then a week or so later you realise there is some other industry where it becomes relevant.

The SME sector is an area where there has already been some action. It just may need to be scaled up more. Things like rates relief and so forth are very sensible, because rates is a significant component of costs for quite a lot of small businesses. A lot of them will be in the high street and so forth.



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For households, if everybody was plugged in to the tax system, it would be maybe easier to do that. That is the way you can do it in the US. The question is whether you can do something through PAYE for people who are still in work. If firms were told, "You have to keep paying everybody you were employing before this at their existing wage and so forth", and then this was reimbursed to businesses, that is probably a sensible way forward. What is much harder is something like workers in the gig economy. It is really quite tricky to know how you might hit them.

**Robert Chote:** On households, I would pick up on one point that Andy mentioned: utility bills. Given the challenges that Angela was talking to Torsten about yesterday on getting money into people's hands, the alternative is to minimise the things that are taking money out of people's hands. Utility bills would be one example, and there are various tax elements there. It may be logistically easier to compensate people who would be taking money away from households than it is to get it to them directly. That is one possibility.

In terms of businesses, I do not have very much to add to what Charlie has said. Clearly, the Government will, I presume, be particularly concerned about those industries that are getting food and medicines to people, et cetera, so there will be some prioritisation in terms of what is most important through this period, but, as Andy says, the lesson of earlier crises is that one sector's problems in a situation like this soon become every other sector's problems.

**Andy King:** I do not have a lot to add to that.

Q20 **Chair:** Sir Charles, I would like to pick up on the interesting point you made about making up lost revenues across the piece. You said we should not target it but make it available for all businesses. I know this is an impossible question to answer with any accuracy, but that sounds like a huge, huge amount of money.

**Professor Sir Charles Bean:** It is actually quite easy to—

Q21 **Chair:** If the economy fell off by 6%, you could then run a calculation, I guess. Would it be within that bound of the suggestion here that you throw whatever it takes at it? I am thinking about wartime levels for a short period. Does it work within that construction of this?

**Professor Sir Charles Bean:** Let us suppose, just to pluck a number out of the air, the hit to GDP is something like 5% annually. That is what you have taken out, so that is what you have to put back in. You are talking about an increase in borrowing of 5% of GDP. Think about what happened during the financial crisis. We were around 40% of GDP when we started; we came out of it not so far from 80% of GDP. Essentially, that was not only because of the debt but the persistence of the downturn.

This ought to be different from the financial crisis, because the key thing about the financial crisis was that there were underlying structural



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problems that we were not aware of going into the financial crisis. Those things were exposed, such as the overleverage in the banking system. Those excesses had to be worked through and corrected. That is one of the reasons why recoveries from financial crises are so slow. This time around, there is not a fundamental structural problem in the economy that needs correcting, at least for the most part; it is just an exogenous shock that has hit us in the health sphere.

It is reasonable to think that any increase in borrowing you do now really would be temporary and would just last pretty much as long as the health crisis lasts. The order of magnitude ought to be the same as the order of magnitude of the hit to GDP.

**Chair:** Robert, following up from that, taking the suggestion here that GDP falls away for one year by 5%, the argument here is that you need to put that back in and that means more borrowing. In terms of our indebtedness, of course the ratio of debt to GDP is now far higher in fact, because of course we have not eliminated the deficit through time and it has continued to go up. It is at the sort of levels where Philip Hammond would have said there were vulnerabilities around that. Does that sort of scenario stack up with OBR thinking on whether the economy would be in a sufficiently strong place to be able to take that kind of additional borrowing in that period of time?

**Robert Chote:** I would come back to Olivier Blanchard. This is not a time to be squeamish about one-off additions to public sector debt. It is more like a wartime situation. This is money well spent. It then confronts you with challenges around what you do coming out of this. Is it still appropriate to be happy with debt broadly stable in normal times, as the Government appeared to be when we were drawing this up? You might take a different view of that coming out, but that is not an argument for not doing what is necessary now.

Charlie's distinction between the structural and the temporary is absolutely key. It also comes to the pain of getting out of this at the end. In the financial crisis, we basically discovered, after two years, that we had a structural budget deficit of 10% of GDP, not one of 2.5% to 3% of GDP. You could not rely on the economy getting back to normal to bring that down, hence the period of austerity that followed. There are plenty of arguments to be had about whether that was too much or too quick, et cetera, but there we are. It would have had to have been dealt with at some stage

What you hope you have here, as I say, is a large temporary increase in borrowing. There will inevitably some scarring effect here that will persist for a while, but hopefully it will be relatively small. That is a very different situation from suddenly discovering that your economy is permanently, in cash terms, going to be about 12% smaller than you thought it was going to be two years previously and that, therefore, all the decisions you had previously made about the funding of public services need to be revisited on a permanent basis. In an ideal world, we would be confronting this



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with a lower debt and a stronger position, et cetera, but we are in the place where we are, and I would not be squeamish now.

**Andy King:** There are a couple of figures you should bear in mind. The ratio of public spending to GDP increased by 8% of GDP in the financial crisis and by about 20% of GDP in the second world war, so a 5% number is small relative to responses to very large shocks.

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

Q22 **Felicity Buchan:** It seems to me that what is key here is keeping workers in their jobs. They may not have a physical job to go to; perhaps we redeploy the labour for a temporary period of time, but we need to keep them attached to their employers so they can return after three months. Is that possible? How do we do that?

**Professor Sir Charles Bean:** It is not just keeping the workers; it is keeping the business as well. It is both sides of the coin. It is essentially providing the finance to make that possible.

Q23 **Liz Kendall:** Robert, you said there would inevitably be some scarring. Where is that likely to be?

**Robert Chote:** Inevitably, some businesses are not going to survive. It is not going to be possible to protect some. You would expect there to be some adjustments coming out of this to persist beyond simply people being at home for a while, going back and things not being as they were before.

This does not look like other sorts of scarring. As I say, in typical recessions you worry about people being detached from the labour market for really extended periods of time, atrophying skills and work capability decaying, and the hysteresis or the lasting scarring coming from that. That is less likely. It is more likely to be the fact that there will inevitably be corporate casualties through this process, and it will take time for that to be addressed.

Q24 **Liz Kendall:** Was our economy in a good place to deal with this? Which bits were? Which bits were not? That links to the second part of the question. We are very early into all of this, but is it going to make us think longer term about aspects of our economy that need sorting? I mean things such as the gig economy and the fact we have an ageing population and not enough people to look after them. Are you thinking at this stage already about what this might tell us about our economy and how it can cope, just as hopefully the financial crisis did tell us something about our economy?

**Robert Chote:** There is a sense that, in ways you probably do not think about at the moment, you will emerge with changes to business processes and public sector processes. There will be some temporary features of this that actually end up being embedded. Is this going to result in a step change in the proportion of retail sales that are done



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online versus people walking through shops? On the public sector side, what is the proportion of GP consultations that are handled over the phone or online versus people going in to surgeries? That may change.

There may also be changes in consumer psychology coming out of this. Having gone through this process, when times are normal in future, for those people who do have the ability, will people feel like they need to maintain a higher stock of precautionary savings than they would previously have thought they needed? There is a whole set of ways in which what is, as I say, hopefully a fundamentally temporary thing can have structural and other changes. If weaker firms go the wall, coming out of this, it may be even harder to discern what the underlying productivity picture is than it was before.

Coming to the earlier part of your question about the backdrop to this, we started off in a situation with the economy where, broadly speaking, demand was in line with supply. There was neither a huge degree of overheating nor an enormous amount of spare capacity, in a situation in which we have all—this is not just the UK but other countries—been getting used to the fact that large mature industrial economies are now more likely to grow by maybe 1% to 1.5% a year than the 2.5% you might have thought was the norm in the pre-crisis decades.

The backdrop was one where people had to take that adjustment on board but, as I say, also a cyclical position that did not look enormously as if the economy was either overheating or had huge spare capacity. As we discussed earlier, you now have a hit, temporarily, to both demand and supply. Exactly how much weakness there is in the economy at a given moment or which of those is the dominant factor is not going to be easy to discern at all.

**Q25 Liz Kendall:** I have one more question. We have talked a lot about whether this is really going to be temporary and helping people to get through a hole to come out of the other side. We do not know how long this is going to go on for. There are some suggestions that, even after the action that is being taken, we still may be asked to have very different ways of behaviour in a year to 18 months' time. We do not know yet.

How is this going to affect the OBR's work? You do not think that doing a new forecast in a month is any good. What about two, three or four months' time? How is this really going to affect your institution, which is supposed to be providing independent and strong forecasting and analysis of the impact of Government plans? Have you begun to think through whether this will change the way that you work?

**Robert Chote:** It is clearly an enormous challenge, and the short answer is that it is too early to tell. The fundamental purposes of the OBR, providing transparency and rigorous analysis of the state of the public finances and the outlook for them as best we can judge, remain as valid in this situation as before.



When I appeared before this Committee for my appointment hearing, I said that the two key things I wanted to deliver were transparency and a greater willingness to be upfront about the uncertainties that lie around the outlook. Clearly, the latter of those is now true in spades. It will make it that much more difficult for Governments to make decisions about what the best course of action is. Worrying precisely about whether you are 100 million on one side of a fiscal rule three or four years out may be weighing rather less heavily on Ministers' minds than it has done at some times over the past 10 years. There might be more rough-tuning rather than fine-tuning there.

The underlying case, in a world in which Governments are going to be taking innovative action on taxation and spending, is that having independent scrutiny of that and the discipline of the process remains valid, but, as you say, it will be a different task from the one it has been before.

**Professor Sir Charles Bean:** Could I just add something? It is a mistake to think our value-add is in forecasting. People do not know what is going to happen in the future with any precision. What is happening at the moment with coronavirus is an absolutely classic example of that. There is no way we could have predicted the scale of what was unfolding in our central projection or anything like that.

When I was at the Bank of England, and again since I have come to the OBR, we have always tried to emphasise the uncertainty around forecasts. It is important that you, the media and everybody who reads our material does not get hung up on central projections. The real thing you should be interested in is the range of possibilities and the risks. Potentially, the useful products are things that shed light on aspects of the public finances, like the *Welfare Trends Report*, the *Fiscal Risks Report* and the *Fiscal Sustainability Report*, which in a sense are probing the bigger issues and bigger risks to the public finance. Those are of more value than simply saying, "What is your forecast for the next five years?"

**Andy King:** In the *Fiscal Risks Report*, the big message was that in managing the public finances you have to be aware that shocks will hit but they are unpredictable. That is the nature of them. While that is happening, you are constantly dealing with pressures: pressures like ageing or the rising cost of healthcare. What we are seeing now is precisely what the *Fiscal Risks Report* warned about. We did not predict this shock, because people do not.

Q26 **Anthony Browne:** I had some questions about the types of support that the Government have offered in the Budget and whether they are extendable. If you look at the different schemes they have outlined, most of them are geared towards small businesses. As was mentioned, these are things like business rate relief and the time to pay. There is small-business grant funding, which is giving a £3,000 grant to



companies.

I was particularly interested in the Coronavirus Business Interruption Loan Scheme, which is £1 billion, through the British Business Bank, guaranteeing 80% of loans to companies that are otherwise viable. That is clearly scalable, if they want to scale it. The Bank of England has cut the countercyclical capital buffers, so the banks will have more money to lend. I am just wondering what you thought about giving loans to companies as a business support mechanism in this situation versus grants or other forms of funding. Is this sort of scheme likely to work in its broader support objective or not? Is it scalable or not?

**Professor Sir Charles Bean:** The larger the shock turns out to be, the more it pushes you to think that grant has to be the solution. Loans are fine if it is bridging over a relatively short period and the business has not suffered a large loss in revenues. It can probably cope with it. If you actually have quite a big loss in revenues and you merely have a loan to get you through to the other side, you still have to have the wherewithal to pay that back. If the loan you end up with is sizable, it may not be a viable business at the end of it. The deeper and longer it is, the more it pushes you in the direction of grants relative to loans. Having said that, some mix may be appropriate.

Q27 **Anthony Browne:** That is what I was wondering about in terms of this loan. It was exactly that: that you will end up with lots of businesses that are over-indebted and struggle with a debt mountain at the end of it. Robert, do you have a view?

**Robert Chote:** There is clearly a mix of things here. There is a desire to have some contribution both from the business and otherwise, but, at the end of the day, you want to do this in a way that ensures they are able to thrive when we come out of this; you do not want to just load something on top of them, which will then actually weaken that recovery and make it more likely it is protracted than it otherwise would be. As Charlie says, that pushes you more in the direction of grants than loans. At the same time, thinking about appropriate burden-sharing is important, but it is less important than ensuring that help gets there.

Q28 **Anthony Browne:** In terms of either grants or loans, if you do it through loans, the banks have their own systems for doing it. If you do it through grants, how do you assess what is or is not a viable business? I am thinking about Flybe, for example. Clearly it failed—and it said that coronavirus was one aspect of it—but there were big questions about its viability beforehand. There are some that are clearly viable, but there is going to be quite a lot of middle ground.

**Robert Chote:** Yes, it is not easy. Again, it comes back to Charlie's point. The more serious this is, the more blunderbuss you have to be in the approach. In an ideal world, yes, you would have people intricately looking at whether the business is solvent or illiquid, et cetera. The bigger it gets, the more problematic that is. When the fire is large



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enough, you just spray the water on and worry about it later. That is likely to be the direction.

**Andy King:** Thinking about the financial crisis, at that time one of the things the Government tried very hard to do was to get enough people into Jobcentre Plus to be able to process the unemployment they were expecting. Processing loan claims is the same thing. There is no massive public sector entity that could go through the forms.

Q29 **Anthony Browne:** The banking sector is the only sector that can do that.

**Andy King:** The banking sector can do it. Turning a loan into a grant is quite an easy thing if you do not ask for it to be repaid. If you start with loans, you always have the option to turn it into a grant.

**Anthony Browne:** Yes, non-repayable loans.

Q30 **Alison Thewliss:** I just have a couple of questions. Professor Bean, I wanted to pick up on what you said about the limitations of things like cutting the bank rate. Are there other levers you think the Government can use or should be using? What might those be?

**Professor Sir Charles Bean:** Of course, the bank-rate cut is the Bank of England. Although changes in bank rate and possibly quantitative-easing programmes get the media attention, they are not actually the important ones at the current juncture. It is so called credit-easing policies and policies that are designed to keep the financial markets functioning. Unlike the financial crisis, the basic problem is not in the financial sector; the problem is in the real sector, but that in itself can create problems in the financial sector. If businesses fold, that means there are more non-performing loans in the banking sector and so forth. That is what the Bank of England can do.

As far as Government are concerned, they need to use the sorts of tools we have been talking about, some of which have already been introduced in the Budget and some of which can be scaled up. They could also possibly use some things that are a little bit more revolutionary. I mean some of the things we have been talking about like large-scale grants and filling in the hole. They are the things that look as if they are targeted at the problem. There is a risk of feeling, "We have to do something. Let us pull a lever. Let us have a temporary cut in VAT".

Q31 **Alison Thewliss:** That is what I am trying to establish: which of these things would be effective and worthwhile doing and which of them are almost panic grabs.

**Professor Sir Charles Bean:** This is a case where policymakers, both in Whitehall and Threadneedle Street, want to focus on, "What is the problem? What is the best way to deal with the problem?" as opposed to, "We must do something; we must be seen to do something". Having said that, here, by and large, they have done the right sorts of things. They



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have been focused on dealing with the underlying shock and its consequences. I have to say that I think the UK is much better placed to deal with this than either the United States or the euro area, because in neither situation is there close linkage between the financial policymakers and the fiscal side. In the eurozone, of course, you have multiple fiscal authorities.

**Robert Chote:** As Charlie says, the authorities will clearly be alert to what is fundamentally a real-economy issue becoming a financial-sector one. There the focus will not just be on supporting demand overall and what those mechanisms are but whether there are dislocations in the functioning of markets or other particular problems. We are seeing big movements in equity prices, big movements in bond prices. Will we suddenly discover that there is a set of exposures for some set of actors out there that results in losses that are going to ripple through the system more widely?

It seems like a lifetime ago, but a few days ago people were quite focused on who is holding the junk-bond debt of the US shale-oil sector. They will, I am sure, be alert to whether there are particular issues in some sovereign debt markets that could ripple through. Being alert to that and thinking about what you might need to do there will also be important in addition to the mainstream support for demand.

**Professor Sir Charles Bean:** The obvious place to be focusing on in terms of the financial sector problems is not the banks, initially at least anyway, because they are much better capitalised than they were going into the financial crisis. The likely source of bad assets is going to be highly leveraged loans and the high-yield bond sector. That is much more prevalent in the US than in this country, but that is basically businesses that have very high debt relative to the size of their operations. If there is an interruption to their revenue stream, they are really under a lot of pressure.

I am sure that central banks will be very much focused on the consequences of that, because there are questions around who holds those assets, whether they are concentrated and so forth.

Q32 **Alison Thewliss:** Thank you. The other point I wanted to pick up on was what you said, Mr Chote, about the situation in 2008 and the weaknesses that we perhaps did not know we had. Your report highlights lots of weaknesses that we do know that we have in terms of productivity, Brexit, which everyone seems to have forgotten about as well, and those things that are coming ahead.

The result of 2008 was sustained austerity, which has then led us to where we are. Given the situation that you outline in your report, are you able to make a stab at the likely consequences for when we come out of this situation? If the economy is not in the greatest of places, what will then need to happen to put us back onto some kind of sustainable course?



**Robert Chote:** It comes back to the earlier question. The hope has to be that, unlike the financial crisis, we do not end up in a situation where, in a couple of years' time, we discover that we have a deficit of 10% of GDP that can only be brought down by policy actions, leaving aside all the debates about how quickly, where you should do it and where the pain falls, et cetera. The hope is that you have something that is severe but more temporary. You therefore want to be in a situation where you come out of this with firms being able to get back on to a trajectory and, hopefully, on the public sector side, while you will clearly be left with a higher ratio of debt to GDP, you are not left with a structural deficit that then requires a sustained programme of fiscal tightening in the wake of that to deal with it. There are no guarantees that you are not going to end up with that, but that, you would hope, would be the key difference with the financial sector.

In the longer term, there are broader issues about what your appropriate fiscal strategy ought to be in good times. With the legacy of a higher ratio of debt to GDP, are you still content with the medium-term profile that the Government were looking for on the deficit and essentially stabilising debt, or will the need for action to get it down over time appear more powerful at that stage?

**Andy King:** The nature of the Chancellor's review of his fiscal rules will change fundamentally.

Q33 **Alison Thewliss:** I noticed as well from your report that you are making this on the basis of rules that are going to change and how much they are likely to change. The next question is what impact that then has on the outlook.

**Robert Chote:** Quantitatively, at this stage, setting a new target for what you want the structural budget deficit to be in a couple of years' time would seem to me, although you have told us that we are not supposed to talk about this, to be for the birds at that stage. As I said, there is a broader issue. The conventional wisdom is that you want to have the debt-to-GDP ratio on a declining trend in normal times in order to give you the scope to deal with shocks like this, although no one would have expected a shock like this. That is the sensible basis.

The Government took the judgment, supported by an awful lot of academics and people who say that, "At the moment, you can be content with a high but stable debt-to-GDP ratio because it is just relatively cheap for the Government to borrow and even cheap relative to the subdued growth rate that you expect in the economy". That, I am sure, is the sort of thing that you would come back and revisit in the wake of this.

At the moment, we are supposed to have a review of the fiscal rules that reports before the Budget. The situation is that it is for the Chancellor to decide what to do, what to say and what roadmap to set at that point. We will still be away from being in a position to know or judge what the



right thing to do is in normal times, because we will not know, by then, what normal times look like.

**Q34 Harriett Baldwin:** Can I go back to the forecasts and the impact that the action taken by the Bank of England since the Budget will potentially have on your outlook? As I would summarise it, the Bank of England has done three things: it has cut the base rate to 0.25%; it has introduced the term funding for small and medium-sized business, which is worth about £100 billion; and it has cut the countercyclical buffer back to 0%, which they think will add a further £190 billion lending capacity to the economy. What impact would that have on your forecasts?

**Professor Sir Charles Bean:** In terms of processing this, we would just put the cutting bank rate through our normal multipliers. It will be modest. If we were doing the forecast we might ask, "Do we even want to scale down the demand impact?" simply because people do not want to go out and spend at the moment. That bit is relatively straightforward.

For the other two elements, it is important to realise that they were introduced to stop something bad happening, as opposed to changing the central forecast. They are only necessary because of the risk that you get a financial stability event. In that sense, we do not have to do anything to the forecast to incorporate them, because the forecast is already predicated on the idea that the financial markets continue to operate reasonably smoothly. The problem would be if they had not introduced them and we thought there was a risk that we would see some replay of what happened in 2007-08. We would then have to put something adverse into the forecast.

We do not have to explicitly take account of it for those two elements for the economic outlook. That said, they do potentially have implications for the fiscal side, because the Term Funding Scheme is essentially the Government lending to businesses. Andy may want to expand on that, since it is his bailiwick.

**Q35 Harriett Baldwin:** I actually wanted to ask Robert. You were the one who made the statement that the budget forecast of debt falling as a percentage of GDP is only there because of the repayment of the former Term Funding Scheme. Is that right?

**Robert Chote:** That is right. On page 143 you can see that we essentially have the path of public sector net debt, including and excluding the Bank of England. As you say, the TFS has pushed up the debt-to-GDP ratio, but that then comes off. The underlying picture, if you look at public sector net debt excluding the Bank of England, is that it is broadly stable, at around 75% of GDP. The public sector net financial liabilities number declines because it includes a wider range of assets, some of which are rising in value over this period.

Looking at all of those, the underlying picture is that you saw a large increase in net debt as a consequence of the fact that it took time to get



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the budget deficit down after the financial crisis. Ahead of all of the recent events, it would have been looking broadly stable rather than coming down.

If you are particularly focused on the fact that, when the rules were set out, there was a line that said, "This will ensure that debt falls over the course of the Parliament", yes, on that basis, but the big picture is, pre all of this, you would have had a flat-ish debt to GDP ratio. Of course, now you have it spiking high.

**Q36 Harriett Baldwin:** Will the new scheme, which I understand is not indemnified by the Government in the same way, have the same impact on that?

**Robert Chote:** I have not looked at it in detail.

**Harriett Baldwin:** It is 80%.

**Andy King:** To the extent that the asset side of it is loans and the liability side of it is bank reserves, it would score in the same way. I have not seen the precise detail, but that would be my assumption.

**Q37 Harriett Baldwin:** The Bank of England balance sheet is doing a lot of work here, and it is obviously state-owned. Are the public finances correctly reflecting the way in which the Bank of England balance sheet is being used here? Should it be more directly linked to what the Government debt is?

**Andy King:** It is directly linked to the measure of public sector net debt. That measure has many wrinkles in it that make it strange, this being one of them. You essentially have a scheme that has assets equal liabilities, and it adds a lot to public sector net debt because the assets are treated as illiquid. The Bank of England's activities have had an increasingly large effect on that particular measure of public sector debt as its balance sheet has got larger.

**Q38 Harriett Baldwin:** Linking back to the previous section, does the Bank of England have more scope to do temporary measures now that the bank rates are so low and they have already made these big announcements?

**Professor Sir Charles Bean:** It depends what the measures are for. I want to distinguish here from monetary policy, i.e. trying to change the level of aggregate demand, which is what variations in bank rates are for, which is what the Monetary Policy Committee does. Since early 2009, the instrument there became quantitative easing, or asset purchases. On that particular issue, there is a general sense that central banks have less room for manoeuvre now, because the world we are living in is one where the underlying real interest rate in the world economy is much lower. It is about three percentage points lower than it was in the late 1990s.

There is a lot of debate about the forces that have driven this, including demographics, the integration of China and reduced propensity to invest



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because of changes in market structure, particularly in the US, and shifts in preferences to safe assets. There is a big academic debate on this, to which there is not yet agreement, but there is a general sense that most of these forces will be there, at least for some time to come.

When I joined the Bank of England committee, we thought of bank rates as fluctuating at around about 4.5% to 5% as the norm, with a 2% inflation target. You had plenty of room to cut rates to stimulate the economy. Now, the average rate might be 1.5% or 2%. That means that you have much less room to stimulate the economy through bank rates before you hit the effective lower bound, because you cannot push it too low. That is when you get into asset purchases.

In principle, the technical limit to asset purchases is way off. The Bank of England has primarily bought Government securities and a little bit of corporate debt, but you could buy a lot more private credit instruments, you could buy equities, you could buy fine art, and you could buy real estate—foreign as well as domestic. The technical limit is when the central bank has acquired all the assets in the world. Long before you ever get anywhere near that, other issues start to raise their heads. What we have of course seen is that, in the low-interest-rate world, and with the use of quantitative easing in particular, because it is seen to drive up asset prices, people became conscious of its distributional consequences, and there is quite a reasonable political uneasiness about that. There is also the worry that trying to push yields down and down encourages investors to go into excessively risky assets in an attempt to raise yields.

There are limits to how far you want to rely on monetary policy to sustain demand going forward. There is some room, but we are in a world where fiscal policy needs to carry more of the burden anyway. The fact that underlying interest rates are low—this is the Olivier Blanchard point—increases the comparative advantage of fiscal policy relative to monetary policy as a weapon.

Of course, there are lots of other things that the Bank of England does in the way of keeping the financial markets operating, including its various liquidity provision facilities and so forth. Macroprudential is part of that. There is a lot it can potentially do in that territory, depending on what is required. To take another example, we saw in the financial crisis that the US Federal Reserve was very innovative about inventing new schemes to deal with particular pockets in the financial markets—not-conventional banks, but money market mutual funds and similar sorts of investors that were in trouble. They tailored new programmes to deal with problems that emerged. The Bank of England certainly extended the range of lending facilities during the crisis; we extended the range of collateral that we would involve, and started auctioning funds rather than relying on people to come to us through the analogue of the discount window.

There is a lot of scope for the central bank to do things to keep the financial markets going and I have absolutely no doubt at all that they



will do that. It is not quite the end of the road for monetary policy, but we are in a world where fiscal policy needs to bear more of the burden.

**Q39 Ms Eagle:** Prior to this hopefully temporary event, Robert's forecast was characterised by the Resolution Foundation as incredibly grim but far too optimistic. The IFS described your growth forecast particularly as more positive than the Bank of England's forecast but still very weak. Forgetting about coronavirus, which we have talked a lot about, could you say a little about what the underlying mechanisms are and why you are too optimistic as well as presenting us with a grim forecast?

**Robert Chote:** Yes. I presume it is now too optimistic on the basis of the coronavirus but was grim as an underlying basis. As we mentioned earlier on, one issue prior to the crisis was what you expect the underlying potential growth rate of the economy to be in normal times. This links very closely to the productivity puzzle. We have seen less growth in output per hour worked in the wake of the financial crisis, though the turning point was arguably slightly before it, not just in the UK but in other countries, which has led most long-term economic forecasters, here and elsewhere, to take a more pessimistic view of what your central expectation of the growth rate of the economy is, looking forward. Simplifying it, we now assume that 1.5% of GDP is a reasonably central judgment, looking forward over the long term, rather than 2.5%. The economic forecasts that we inherited were predicated on the economy being able to grow by 2.5%, or maybe 2.75% if you are lucky.

There is a persistent weakness of productivity growth. The longer it has persisted after the financial crisis, the harder it is to argue that it is a reflection of temporary consequences, such as the gunning up of the capital markets on that basis. Inevitably, with at least as much art as science, the longer the period of weak performance goes on, the more weight you have to place on that as your best guess of what the central picture would be.

Looking over a longer historical period, it is clearly hard to argue that what was going on precisely at some point in the 19th century is the right guide to what should be happening in future, but it does tell you that these growth rates do shift over time and says something about the idea of assuming that the pre-crisis decades were necessarily the right ones to be looking at in a sensible picture to go forward.

We have brought down the long-term growth rate, not merely just these five years but what we would expect to plug into our long-term sustainability analysis as a growth rate. It has brought it more in line, for example, with what the Congressional Budget Office would assume for the United States and their long-term projections for other studies in places like Australia, New Zealand, and more in line with the relatively few typical studies of that in the UK as well.

That said, there would be huge uncertainty around that, leaving aside coronavirus, which we presume to be temporary, but also Brexit, et



cetera, and the uncertainties that we have spent most of these sessions talking about over the last three or four years. We have often made the point that you try to come up with your best assessment of what the impact of Brexit might be, and we have there a temporary impact—

**Ms Eagle:** I am going to come to that.

**Robert Chote:** We would always have said that, whatever your uncertainty is around the consequences of Brexit, it is dwarfed by the fact that you just do not know what the long-term underlying growth rate of the economy is.

Q40 **Ms Eagle:** I was just going to ask about this. I am trying to be optimistic. We are meant to be on the edge of the fourth industrial revolution. There is huge technological change going on, all of which ought to be adding to our productivity. We are an advanced, highly skilled economy, although we have some deficiencies in skills and this may tie into productivity. Why are we not beginning to see some of those increases to trend growth that you might expect, being on the cusp of technological change, which we all know is happening now and even more of which is just around the corner? Are there countries that we should be looking at to see where we can more effectively grab the increases in trend growth that might be out there because of technology?

**Robert Chote:** If you look at page 208, there are a range of techno-optimists and techno-pessimists that frame some of this debate. There is the Robert Gordon argument, which is, “We have had three industrial revolutions and that is your lot”, in terms of their impact on underlying growth. He is not particularly confident that the information technology would show up in those sorts of numbers in that sort of way. You also have other people who say artificial intelligence and machine learning will maybe push us back onto a higher trajectory.

**Professor Sir Charles Bean:** Absolutely. Just as there is a lot of debate in the academic world about why the underlying real interest rate has fallen, there is a lot of debate about what has happened to productivity and what is likely to happen going forward, and you have people on different sides of the debate. Robert Gordon is a techno-pessimist who has this long book documenting the last couple of hundred years of progress in the US, which it is mainly focused on, on the back of three big, general-purpose technological revolutions: first of all, steam and railroads; then electricity and everything that went with that; and then, more recently, digital. He then takes a rather pessimistic view about the prospects going forward.

A professor at MIT, Erik Brynjolfsson, is right at the other extreme and says that we are on the verge of a new technological revolution with artificial intelligence, biotech, nanotechnology and all of these sorts of things. We will eventually start seeing the consequences of that in the productivity numbers.



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It is often the case, when there is some new invention, that you do not see very much initially.

**Ms Eagle:** Word-processors were used as typewriters until suddenly people realised they ought to be using them as word-processors.

**Professor Sir Charles Bean:** Going back to sometime in the late 80s, the Nobel Prize winner, Robert Solow, famously quipped, "You can see the computer age everywhere but in the productivity statistics". He said it just at the moment that productivity growth picked up.

I have always more on the techno-optimist view and, in fact, that is what was embedded in our previous forecast. In the long run we had it picking up to 2%, but there has been an accumulation of evidence of this persistently low productivity growth around the world; it is not a UK phenomenon. Our productivity growth has been even weaker, partially associated with Brexit, but this really is a phenomenon that is common to countries on the productivity frontier. It is not relevant to a country like China, which is surging up to the frontier, but the United States and our European counterparts have all seen productivity growth slow.

When you look at our chart, it looks like it is at the financial crisis that it happened, and the level of productivity is about 20% below where it was if you extrapolated the pre-crisis trend. However, if you look at the US, it looks like the slowdown is from about 2003. Initially, people thought the slowdown was mainly a financial-crisis phenomenon. People have switched to thinking that is probably not the key issue here. The answer is that we really do not know going forward, but, from the point of view of our long-term assessment, we decided that 1.5% was a bit more central, between 1% and 2%. You could see either of those being where we go to in the longer term. Assuming that we will be going back to 2% just looked a bit uppity.

Secondly, on top of that, there is a question about the near-term evolution of productivity, and there you compare us with the Bank of England where, actually, it has a more bullish growth projection than us, but its productivity assumption is distinctly more pessimistic. That is partly because it has a bigger hit from Brexit coming through in the near term than we allowed for, but some of it is just a judgment thing.

Q41 **Ms Eagle:** Coming on to Brexit, we have three fiscal events this year after having only one last year prior.

**Professor Sir Charles Bean:** Is that all?

**Ms Eagle:** That is without any of the ones that may happen as a result of coronavirus and the weekly ones that we are probably going to get. We also have Brexit at the end of the transition period at the end of December and total uncertainty about trade arrangements, even though we are an open and trading economy in a world that is currently stalled because of coronavirus. Do you think you have been grim enough?



**Robert Chote:** As I say, the issue of coronavirus is going to dominate over a two to three-year horizon any of those underlying judgments.

**Ms Eagle:** It was difficult enough without it, was it not?

**Robert Chote:** It was difficult enough without it.

**Ms Eagle:** You could say we have underlying conditions that might make this even worse and more dangerous for us as an economy, because of these other structural things that we were going to have to go through.

**Robert Chote:** It would always have been the case that we would have sat here and said, "Clearly, you want to avoid a disruptive exit. Leave aside the issue of where exactly you end up in the trade relationship; getting there in a disruptive way does nobody any favours". In the current circumstances I am sure that lesson is, to the extent that anybody has bandwidth to be thinking about that at this stage—who knows to what extent decisions may end up being moved further out for exactly that reason?—the desire to avoid an unnecessary additional jolt to the economy would not be lost on anybody.

In terms of the assumptions that we have made on Brexit, as you can see from the report, as best we can tell, the economy is about 2% smaller now than it was or would have been in the absence of the vote, although there is a lot of uncertainty around that. That is partly because net inward migration has been lower, but we also are assuming that there is an overall 4% hit to productivity as a consequence of moving to what we would assume to be a typical free trade agreement. Maybe a third of that has happened; we said that a third has happened, a third may be over the course of these five years and there may be a third beyond that. In the early part of this, as you can see this through the forecasts as they have been evolving, this is dominated by the fact that business investment has been even weaker than we anticipated in the immediate wake of the referendum, with less capital investment, which has an effect on productivity.

If you look at the assumption that there is more to come from here, again, pre-coronavirus, we would have been assuming that once the future trading situation is clarified, that provides an opportunity for business investment to pick up as that uncertainty is taken away, and it is then more the conventional impact of trade frictions and the fact that it becomes more difficult to get the gains of specialisation that that would pick up.

Q42 **Ms Eagle:** On trade friction, it seems clear that, in the passage from the Theresa May Government to this Government, we are likely to be in a situation where we have more rather than less trade friction, because a free trade agreement along the lines of CETA is very different to close alignment and frictionless trade, which is what the previous Theresa May Government wanted to aim at in their political declaration. What will be the result of that shift to much more friction in our trade, even if we get



to the stage where the uncertainty has ended and a deal is done?

**Robert Chote:** In terms of the way that we forecast, the analysis we presented here is not a shift from a forecast predicated on the desired May outcome happening versus the desired Johnson outcome happening. We have throughout taken the view that it is impossible for us to meaningfully judge exactly where the negotiations are coming out, so we made a set of broad-brush adjustments at the beginning and then we have continued to look at those over time, and look back again at the evidence of what arrangements mean.

In terms of a comparison, we have not tried to go episode by episode on what a particular proposal is. At the end of the day, while our forecasts are based on Government policy, they are not necessarily based on the assumption that particular policy objectives are met. This is a negotiation and so, therefore, I am afraid the brush with which we paint this remains broad, but, as best as we can judge, it is predicated on what looks like a typical free trade agreement and, if you end up with something that is not quite that, the chances of making a large quantitative difference to that 4% number, relative to the uncertainty that lies around it anyway, are not that great.

**Professor Sir Charles Bean:** Absolutely.

Q43 **Ms Eagle:** The previous Government's economic modelling in their Brexit White Paper looking at a free trade agreement, which is what is being negotiated now, showed that the reduction in trade from a free trade agreement would reduce GDP by 4.9% over a 15-year period. Is that an approach you agree with, or do you have a different view?

**Robert Chote:** We have looked at a range of different things.

**Professor Sir Charles Bean:** It is on page 27. The Whitehall study is indeed one of the studies that we have included here. What we have basically done, in terms of thinking about how big this shock might be, is looked at the range here and taken an average. We do not particularly want to say one is better than another. They have slightly different assumptions and things like that.

It is important to realise that we do not build our productivity forecast from the bottom up, by saying, "Here is a baseline", and that we know what would happen in the absence of Brexit, coronavirus and this, that and the other, and then layer on an element for Brexit, an element for something else, for the migration impact and so forth. Rather, we form a view on the likely magnitude of some of the contributors. The key backdrop, which is the thing that we have been talking about, is the uncertainty about the underlying trajectory for productivity, which dwarfs all these other things.

At the end of the day, we take a top-down judgment on a path for productivity, bearing in mind the fact that, for some of the elements, we might have an idea of their broad magnitude, but, for others, we really



have very little idea. Somebody else could easily come to a different judgment and I would not say they are wrong and we are right, or anything like that. We have been clear about what judgment we have made, and we can roughly work out the consequences of making different assumptions, and indeed the EFO includes, towards the end, a scenario analysis of different productivity assumptions to expose the consequences for the public finances.

**Q44 Ms Eagle:** Will the £100 billion of extra investment announced in the Budget will help productivity?

**Robert Chote:** You would expect it to do so. It depends, obviously, on what it is spent.

**Ms Eagle:** 50 million potholes might be slightly different.

**Robert Chote:** There are grands projets. I am always a fan of the Eddington report on what incremental changes in transport can deliver, et cetera. To reiterate, we do not do, either in the medium term or the long term, a bottom-up layering on in terms of productivity judgment. If you were to look at the sort of increase in general Government investment, which is the relevant metric, although not precisely the one that corresponds to capital spending here, that is in this Budget, and then you were to assume, heroically, that that was to be sustained into the indefinite future, which is the sort of judgment we typically make in our long-term projections, in that you essentially take the spending and tax choices that the Government have made at the end of the forecast and hold them forward, you might expect that to boost productivity and the potential level of GDP by about 2.5% over the long term.

**Q45 Ms Eagle:** The Chancellor only claimed 0.4% to 0.5%, did he not?

**Robert Chote:** Most of this, of course, happens well beyond the forecast horizon, and the more you are putting this into grands projets, it will take a while to plan, dig and then to deliver a flow of services. For the private sector to then adjust and exploit the opportunities it presents, those gains come a long way further out, which is not to say they are not worth doing.

**Professor Sir Charles Bean:** Just to clarify on the numbers, what Robert was talking about was the consequences of sustaining the higher level of public investment indefinitely, and that that would raise the public capital stock by about a quarter. Using typical elasticities from the academic literature, that would imply an impact on potential output of round about 2.5% of GDP. The big uncertainty depends on exactly what the projects are, et cetera.

The 0.5% number that the Chancellor referred to was about the consequences of just the extra fixed-capital formation over the five years of our forecast period. They are different time periods.

**Q46 Anthony Browne:** I want to turn to the fiscal aspects of this and the



rules on what counts as investment and what does not. First of all, before we even got to the coronavirus package last week, and let alone what we are about to hear today, you described this as the largest budget giveaway since Norman Lamont's Budget in 1992: a £125 billion increase in debt by 2024. As you said earlier, the objective now seems to be stabilising the national debt as a proportion of GDP rather than reducing it. This was all before the coronavirus response. Does the coronavirus response and the increased borrowing that is inevitably going to be a result of that make what is in here less affordable, in terms of all the investments and so on?

**Robert Chote:** We come back again to whether this is a temporary effect that has a stock impact on public sector net debt, which would push up, rather than having a lasting effect of giving you a bigger structural budget deficit than you thought you were otherwise going to have, and therefore if you thought, from the deficit you were aiming for originally, there would be some additional policy action. As I say, I suspect that when we are through this and we have a clearer idea of what the legacy is, part of the review of the fiscal rules that the Chancellor even thought was appropriate before we were in the coronavirus period would be coming back to look at whether that idea of simply stabilising the debt-to-GDP ratio is still appropriate at whatever the new debt-to-GDP ratio is at that point. In that sense, it is certainly not saying that the coronavirus intervention is unaffordable, because we are already planning to do some more activity in the future. Obviously, as we have been saying, we must do what needs to be done now.

In terms of the magnitudes, as you say, it looks like the largest policy loosening since 1992. Bear in mind, in 1992, the connection between the Autumn Statement and Budget in terms of spending. The dominant part of the 1992 loosening was the spending announcements that had been set up in the previous autumn and were then reinforced. The one that this looks most similar to is the Gordon Brown 2000 period of increasing the deficit by a little bit under 1% of GDP across a five-year profile, primarily through public spending. As you say, the net impact on net debt at the end of it is around 5% of GDP.

Q47 **Anthony Browne:** I want to follow up about the sustainability of having the policy of keeping national debt constant as a proportion of GDP, if that is what the policy is. What are the risks of that? The debt interest payments are 3% of revenue, which is a record low since the second world war. Clearly there is a risk that interest rates might go up, but actually Government maturity of bonds is, on average, 15 years, or at least the new debt is. How risky is having such high levels of national debt as a proportion of GDP?

**Robert Chote:** As you said, there are plenty of people making the argument, not without reason, that it is particularly cheap for Governments to borrow at the moment, and therefore this is a good time to be doing it, particularly on investments, if you hope that those will yield high financial or social returns in the future. However, if you



compare the situation now with the situation pre-crisis, the debt-to-GDP ratio is more than twice as high, we have more index-linked debt than we had then, and although, as you say, the average maturity of the bonds, which the UK has often taken comfort from as looking really quite long in comparison to other G7 countries, the fact that some of that debt has, in effect, been refinanced through quantitative easing at policy rate means that the UK is more exposed to nasty interest-rate or inflation surprises than it otherwise would have been.

If you look not at the size of the budget deficit, where what was projected here pre-coronavirus would have been a bit less than the years immediately running up to the financial crisis, but at the amount of money that the Government are having to get out of the gilts market, national savings and other sources, it is higher because you are not merely having to finance the new borrowing, which is a bit less than it was pre-crisis, but you are refinancing the consequences for the debt stock of the financial crisis, which pushes you to essentially needing to raise about £150 billion per year, or 6% of GDP.

On the current set of interest rate and growth projections over this forecast, that arithmetic looks okay. The coronavirus, if anything, does not look like it is producing upward spikes in borrowing costs at this stage. That is fine, but those risks are there, which we highlighted back in the *Fiscal Risks Report*.

Q48 **Anthony Browne:** Did you want to add anything, Professor Bean?

**Professor Sir Charles Bean:** I reiterate the generic point that, broadly speaking, you want to have debt-to-GDP ratios falling at good times to make room for the bad times. Historically the UK's debt-to-GDP ratio peaked at 230%. It was very high at the end of the Napoleonic Wars. It goes up a lot in World War I and then even more in World War II, and then it comes down in peace. Then you can, of course, think of the financial crisis as like a small war. We now have another war, but a war on a virus rather than on each other. There will be similar bad things that happen in the future and you want to make the fiscal space for them.

We have, in our own history, been at 200% of GDP. Japan has had levels up there. Equally we have seen countries with much lower levels, like Greece and Italy, where the sovereign comes under pressure. A key element in this is not just the economics but the institutions and whether the markets trust the institutions. Here I will say that we have a pretty good reputation in financial markets, but it is not one that you want to end up throwing away, because you can then find markets turning against you.

Q49 **Anthony Browne:** It becomes expensive. My last question is about the rules of what counts as investment or not, which certainly, as of last week, the Government were planning to look at. There has been an ONS consultation on this and the OECD sets the rules internationally. I am just wondering what flexibility there is for a meaningful change in the rules,



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shifting stuff from what is now capital expenditure, such as the cost of teachers and human capital, to investment, and whether that is credible in terms of having a fiscally responsible Budget. I come at it from a business perspective, where you count things as investment where you think you have a pretty good chance of getting a positive return. Obviously, you can risk-adjust your different investments, but you are not going to borrow huge amounts of money to make a very risky investment where there is low risk of a good return. How much scope is there to change the rules in a credible way?

**Robert Chote:** From our perspective, it is for the Chancellor to decide what he wants to target in terms of metrics and it will be our job to judge him against that, as well as painting a broader picture of the public finances. In practical terms, if you have a new definition of something that you want to target, it is quite important that the definition of that is clear, and ideally you have some idea of how it has behaved in the past. You obviously also want to avoid the situation where it looks like the Government can then game whatever new definition there is, so making it transparent and ensuring there are basically other people deciding what is in and what is out once you have made those choices, and they reach those distinctions.

The question about whether policy should be guided by the broad rule of thumb that it is sensible to borrow for capital investment because it yields benefits to future generations in a way that current spending does not has been a very long-running one. It was clearly a discussion throughout the period in which the golden rule was operating under the Brown years. There are familiar critiques. In the old days we used to say, "Borrowing for the Millennium Dome is fine, but borrowing for teacher-training is not. Does that make sense?" There were plenty of people making that argument.

As you point out, with the idea that it is safer to borrow for what is defined as investment, you might think that investment is a decent, if not perfect, rule of thumb for stuff that is worth borrowing for the future, but some of it will provide a direct financial return. You can build a bridge that you can charge tolls on or you can have an asset that you could plausibly sell to the private sector if you needed to. There are investments that you would expect to yield a financial return, but indirectly, so of the "transport infrastructure boosts potential GDP, increases tax revenue" model. There are "investment" investments that generate a genuine or arguable social return, like hospitals and other areas like that, where it is not the financial return but it is something that Government might want to do. There are things like investing in rural broadband; is that investment or is that consumption? Is it social policy or is it industrial policy? People could debate those things.

It is another reason to be wary or look carefully at broader measures of the balance sheet when you think about, again, how some investments, or public sector investments, will be put on the public sector balance



sheet at the price you can sell them for—if it is something you could sell—but there are other things that cannot be sold into privatisation, and they will be valued at the cost of making them. Every time you see the cost of HS2 going up, it is increasing its future value on the balance sheet. Does that tell you that your public finances have strengthened? No, it does not necessarily.

As with all of these measures, rules of thumb can be useful even if they are not perfect, but something transparent and where you have an independent referee in the form of a statistical agency and us warning you if it looks like they are gaming it are key.

**Andy King:** Just to add one thing, if you think narrowly about fiscal sustainability as debt sustainability rather than the broader balance sheet, the distinction between current and capital does not feature in that calculation. Putting aside the near term, if you accept our central view of growth rates and interest rates, then borrowing more than 2.5% of GDP will see debt rise. You could classify all the things you wanted as capital, but you could not borrow to finance them and not have debt rising.

**Professor Sir Charles Bean:** There is a danger, in this sphere, of people thinking, “If it is investment, it is alright. It is good. We should borrow against that”. If you are thinking about the public finances, the key issue is what sorts of revenues it is going to generate. To the extent that it is not going to be generating revenues, or not enough revenues, you obviously need a correspondingly higher tax rate to meet that.

Personally, I am kindly disposed to doing things that have good payoffs in the future, whether directly in terms of finances or social returns, better hospitals and so forth, but one must be very careful not to slip into the lazy way of thinking that, simply because it is investment, it will end up paying for itself. That is, by no means, necessarily the case.

Q50 **Anthony Browne:** Coming back to Robert’s point, do we have enough knowledge and information about what investments, whatever they are, will generate returns or not? You just mentioned hospitals. It seems to me that, clearly, investment in healthcare and young people who will return to productive lives might be a return on investment, but actually, if you extend to the likes of older people who are retired, there probably will not be a return on investment. Do we know what is proper, productive investment and what is not?

**Professor Sir Charles Bean:** I have to say that we are not the people to look to for the microanalysis that that you need for that on individual projects. You would expect the individual project analysis, before any of these investments is undertaken, would be looking at what the benefits are, by region, age of the population or whatever, and trying to quantify them. We certainly do not have that sort of micro-information at our fingertips. If we need to ask for it in respect of a particular project, particularly if it is a big one, like HS2 or something like that, then there is nothing to stop us requesting the information.



**Robert Chote:** In terms of making this into a target, this could be a very long, deep rabbit hole down which you would end up going. Not merely would you need to be looking at each new investment project that came along and ask, “What do you think is the return of this?” but you also need to think about the stock of public sector capital. How are we depreciating this, and are you actually capturing what you want to be capturing there as well? It is no surprise that you end up with people typically going for rules of thumb. This certainly underlay the Labour Government sticking with the capital-current distinction under the golden rule. There is also a value because, if this is done on internationally consistent definition, it guards against the gaming.

The statistical agencies are all fully aware of the set of debates here, and they would even have issues about there being some sets of expenditure that are beneficial for the future but, as you put it, do not give you a physical asset or something you could sell. You cannot sell the human capital that you have invested in teacher-training in quite the same way that you could do if the public sector built a building and then decided to sell it. It is no surprise that you end up falling back on rules of thumb.

Q51 **Liz Kendall:** I have two big issues that are hard to do quickly. First, the Government say they want to introduce their new points-based immigration system in January 2021. What is the OBR’s assessment of how significant an impact that will have on the economy? What do you say about that?

**Robert Chote:** The judgment we have taken here is that the move to the new system is something that is more restrictive for the EU migrants and marginally less so for the others. When we are producing our fiscal forecast, we typically take one of the available population projections produced by the Office for National Statistics as a basis—we are not demographers ourselves—to do that. As a consequence of the clarification of this policy, we have moved from the ONS’s principal projection to the zero net EU migration one. That seems appropriate because it gives you the right aggregate number. It does not actually mean that we think there would be zero net EU migration necessarily, but that is a sensible overall picture. It brings it down from 190,000 per year net inward migration that you would have expected on the principal projection at the end of the forecast to, roughly, a little under 130,000 on the new one.

The consequence of that is you obviously have a smaller population. You would have smaller employment—about 0.4% smaller—but you would also, given the mix of people, expect the average productivity of the population that is left, as it were, to be a little bit higher, because of batting average effects, and so therefore the overall hit is about 0.3% on GDP.

Clearly, this would have more effect on the overall size of the economy versus GDP per head, depending on what you are particularly interested in, but, in terms of the overall fiscal implications of running that through, it is actually relatively modest, at £1 billion to £2 billion. Given the



implications you would expect that to have on taxation and welfare, obviously quite a lot of the people affected are not necessarily people who would be paying huge amounts of tax, et cetera. Did I miss anything, Andy?

**Andy King:** No, I do not think so.

Q52 **Liz Kendall:** My second question relates to the stated Government objective of levelling up. I think you told our predecessor Committee that you felt that the OBR providing any regional data or analysis on growth, or a whole number of different things, would take you away from your core purpose. For many organisations, and most importantly the public, how can the public judge whether the Treasury and the wider Government are succeeding in their objective of levelling up if there is not an independent analysis of the measures the Government are taking, by the body that has been set up to do that? Should we change your remit to enable you to enlighten us all?

**Robert Chote:** It is very tempting, as I am about to step down, to say that you can give the organisation every bell and whistle, on the grounds that I would not then be responsible for having to implement it. My personal judgment is that those are important questions, but I tend to believe that having organisations avoiding mission creep and having a reasonably well-defined mandate is a sensible thing.

Q53 **Liz Kendall:** Why do you think that breaking down what you already do by region would be mission creep? I do not understand.

**Robert Chote:** Fundamentally, we are here to assess the outlook for the public finances at a UK-wide level with some subsidiary responsibilities underneath that. Therefore, the implications of regional developments are not core to our purpose but would be to what a lot of other people are interested in.

There is a separate set of questions about, even if you are interested in how well levelling up is working, taking a macroeconomic forecast and chopping it up into a set of regional GDP forecasts is not going to give you the answers to the questions that you would like. The notion of how meaningful the Welsh economy is, as defined in terms of the NUTS 1 regional distinction, when in fact the Welsh economy is three economies, each of which more related to the nearest bit of England than it is to the rest of the Welsh economy, is one issue.

If you are thinking about levelling up, I would be looking at a much more granular level of different indicators of income, business activity, et cetera, because thinking about it in terms of regional GDP, which would be the logical next breakdown from here, is too broad-brush and is not going to give you the answers to the questions you are interested in.

Q54 **Liz Kendall:** The problem is that it is always somebody else's responsibility and it ends up being nobody else's responsibility.



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**Andy King:** The budget document says that the Government have not yet decided what their metric is for monitoring levelling up.

Q55 **Liz Kendall:** Do you have any suggestions?

**Andy King:** There is lots of regional information and there are lots of officials who can draw you trend lines through it. It is a political decision as to how the Government want to see that evolve. My memory of some of the 2010-era targets is that they were thought up quite quickly after the objective had been set. I was not then aware of them having a great deal of traction. If the Government are spending time to think through what levelling up means in a statistical sense so that it can be monitored, it is easy enough for Treasury officials, or any other Department officials, to monitor against a metric once it has been set, and then for yourselves to look at it. To forecast it and then to forecast the implications of changes in policy are for it is a much bigger job than simply breaking down what we do.

**Liz Kendall:** I understand.

**Robert Chote:** There are examples. If you take the Industrial Strategy Council, which has been created to look at a specific area of policy, it has come up with a set of metrics that it thinks is sensible to look at in order to judge the progress of that area. You could certainly have an existing, or another, body that could apply a similar approach to that, so you do not even need the Government to set the metrics themselves. They could decide what sensible ones would be there. As I say, my gut instinct is that having institutions with clear, focused remits, even if you have more institutions as a consequence, is generally the best way to go about it.

Q56 **Alison Thewliss:** My colleagues in Edinburgh have been quite concerned about the delays and the impact that that has on the Scottish Budget, which runs an entirely different way to the Budget here. I just wanted to know if there have been any delays in information that you have been able to send to the Scottish Fiscal Commission so that they can produce their fiscal forecasts, or has the memorandum of understanding meant that the co-operation has worked better between yourselves rather than perhaps between Governments?

**Robert Chote:** We have always had a very good relationship with the Scottish Fiscal Commission. In a sense, the judgments about block grant adjustments are reliant on what they say about developments in Scotland and what we say about developments everywhere else, which is an oddity of the feature, because the two are not necessarily consistent, and the longer the distance between our forecasts, the more complicated that gets.

The Scottish Fiscal Commission is not per se dependent on us giving them stuff. We are in close contact and we get on with them very well. That is not the main area of dependency. The challenge is, obviously, getting decisions at the UK Government level that the Scottish Government would ideally like to know about before they make a set of



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decisions. The Welsh were happy to move earlier in the absence of quite as much knowledge as there was there, but, clearly, having this pushed back in these circumstances was not helpful for the Scottish Government. Andy, is there anything you want to add?

**Andy King:** In terms of the process, we work with them on the relevant bits of the forecast up to the point where it stops being a pre-measures forecast, and then there is a short window where we do not talk to them, where we are working for the UK Government on their policy measures. In this instance that had large effects on the block grant and then, from our side, that information is then provided on the day that the Budget is announced.

**Chair:** Thank you very much indeed. Since we have been sitting, it has been announced that the Chancellor will make a statement to the House of Commons at 7.00 this evening, so we will no doubt get some of the answers to some of the issues that we have been discussing. What you have provided us this morning has been extremely useful in that context and will inform how we approach the coming days and our session with the Chancellor tomorrow. Clearly, there are limitations to what we can do. Professor Bean, you pointed out that, when it comes to QE, we cannot buy up every asset in the world. At the same time, our message to the Chancellor is probably that he needs to throw the kitchen sink at this one. Thank you very much indeed.