HOUSE OF LORDS

Economic Affairs Committee

Corrected oral evidence: How sustainable is our national debt?

Tuesday 20 February 2024

3 pm

Watch the meeting

Members present: Lord Bridges of Headley (The Chair); Lord Blackwell; Lord Burns; Lord Davies of Brixton; Lord Griffiths of Fforestfach; Lord Lamont of Lerwick; Lord Layard; Baroness Liddell of Coatdyke; Lord Londesborough; Lord Razzall; Lord Rooker; Lord Turnbull.

Evidence Session No. 6 Heard in Public Questions 148 - 177

Witnesses

I: Charles Goodhart, Emeritus Professor of Banking and Finance, LSE; Sir Dieter Helm, Professor of Economic Policy, Oxford University; Olivier Blanchard, Senior Fellow, the Peterson Institute for International Economics,

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Examination of witnesses

Charles Goodhart, Sir Dieter Helm and Olivier Blanchard.

Q148 **The Chair:** Good afternoon and welcome to this session of the Economic Affairs Committee. We have a great panel of witnesses this afternoon. Would you like to introduce yourselves before I ask the first question?

Charles Goodhart: I am a retired professor from the London School of Economics.

Sir Dieter Helm: I am a professor of economic policy at the University of Oxford.

Olivier Blanchard: I am a professor emeritus at MIT in Boston, and a senior fellow at the Peterson Institute for International Economics.

Q149 **The Chair:** I will start by asking a broad question, and I would be grateful if you could reply as succinctly as you can. I know that you, Olivier, may want to say something to set out the framework for what you will want to say in the entire session.

I have a simple question. Does debt matter? I ask, because we have received a fair amount of evidence from various sources, some of whom argue that the UK Government do not have a national debt and, if they do, it is heavily overstated. So does debt matter?

Charles Goodhart: Yes, of course it matters. It has to be repaid with interest. The Government can always pay it by creating money to pay it off, but that causes inflation. One of the problems with MMT is that it assumes you can wait until inflation hits before doing anything, whereas the inflationary conditions can get worse and lead up to an inflation that is much more difficult to counter when it takes place.

Sir Dieter Helm: Yes, it most certainly does, and it depends what it is for. If the debt is on what you might call the balance sheet, there is a liability, but it has created genuinely enhanced new assets. Then, it is not a serious problem. If it is to pay for current consumption, which it increasingly is, it is a problem in itself: the interest has to be paid and it constrains other public choices. In particular, it allows us to live beyond our means and pass the cost to the next generation, which will have to pay for it.

Olivier Blanchard: Yes, debt matters, but maybe less than some people think. I asked your staff whether I could make a few introductory comments to which your question is central. If it is okay with you, I would like to spend a few minutes—no more than that, I hope—indicating how I think about these things.

The Chair: Please feel free.

Olivier Blanchard: I have five points. The first is that what is of the essence is not debt but debt sustainability. Basically, a country in which there is no debt sustainability and the debt ratio is expected to explode with a high probability is a country in deep trouble. Sustainability is of the essence, and it is important that that ratio is seen to stabilise over time. Debt reduction, as desirable as it may be, is not existential in the same way. That colours the way I think about this issue.

The second point is how to assess it. There is one obvious tool—and only one tool, I think—which is debt sustainability analysis. The OBR does a good job of it. There is no way to simplify it and just look at one number. Each country has idiosyncrasies, implicit liabilities, uncertainty and so on. All of that has to be taken into account. That is the only way to answer on whether the debt is sustainable or not.

The third point is the dynamics, and I will say things that your committee knows very well. They depend on two main factors: what economists now call r-g—the interest rate minus the growth rate—and primary balances. At this stage, we are in a position where r is roughly equal to g. That could be the baseline that we think about, in which case the evolution of the debt ratio will depend on whether the primary balance is positive or negative. To stabilise the debt at some point, the primary deficit has to go to zero. That should be the way we think about what needs to be done.

The fourth point is that it would be incredibly stupid to try to reduce the primary deficit to zero too quickly. That is for political reasons, because it will be painful and you will pay a political cost, and for macro reasons, because a very sharp consolidation tends to decrease activity and is counterproductive. So there has to be a credible plan for going to zero. There is no alternative to that, but it does not mean that it has to be done very quickly, and it may actually mean that you increase the deficit for some time, if that is justifiable, in order to get to the right point.

The fifth point is that if there is a need for exceptional spending, such as for green investment or defence spending—we will come back to this in later questions—it may make sense to increase the primary deficit for some time, even though it will increase the debt ratio eventually. However, the plan should still be to try to get to zero. The way to make such a path credible is to make cuts to the non-green, non-defence parts of a budget in order to show that there is a real commitment to doing what is needed. With this, you get a path that can be credible and gets you to where you want to go.

Coming back to the question on debt, my answer is that debt is costly; I agree with the other two speakers. From an economic point of view, it decreases capital accumulation. Depending on what capital accumulation is decreased, it may be costly or not very costly, but it is an issue. From a fiscal point of view, as Charles said, it requires more taxes in future, although the answer there very much depends, again, on the valuable r-g. When r-g is zero, you can finance the interest for new debt and keep the debt ratio constant, so the cost in terms of future taxes may be quite limited. However, the notion that debt is costless is a non-starter.

On MMT, I have never fully understood and, I think it is incoherent. One thing that has been said by some is that the central bank should basically cancel the debt it holds, which would decrease the debt. That is nonsense, but I will stop there.

The Chair: Fantastic, Olivier. Thank you very much. You have raised a lot of issues that we will come back to and which I am sure the other panellists would like to comment on.

Q150 **Lord Blackwell:** Following up on what Olivier just said, Charles and Dieter, should we be worried about the current levels of debt in the UK and across the G7? The debt levels have been higher in the past, but you will probably say that it is about not just the level but the trajectory. If it is the trajectory, in the equation that Olivier raised, are you most worried about interest rates or the growth rate, or is it the ongoing primary deficit that we should worry about?

Charles Goodhart: Both the OBR in the UK and the CBO show primary deficits as far ahead as you like to look. Those forecasts themselves are almost certainly understated. A very good article by Chris Giles about two weeks ago showed that the OBR and the CBO have to base their forecasts on what Governments say they will do, and Governments are always prepared to say that they will cut unspecified expenditures four or five years out in order to bring debt to a sustainable level.

If I may say so, the problem with Olivier's point of view is that, if you are to be credible, you cannot just say that you are going to raise taxes or cut expenditures n years ahead, because when that time comes up, it will be politically inexpedient to do so. So you have to start on that path really rather quickly. One of the difficulties we face is that not only is the forecast for primary deficits as far ahead as you might like to look but the expectation, on both defence and climate change, is that public expenditures are likely to go up—indeed, it will be necessary for them to go up. If that is the case, the only alternative is for taxes to go up, too, in order to bring the primary deficit down to zero. If Olivier is being slightly optimistic in thinking that g will be in line with r, it might be a bit safer, in dealing with unforeseeable and unforeseen shocks, to have a slight primary surplus to give us a bit of breathing room in the meantime.

So the question is: what exactly are we going to do to shift a situation that now looks unsustainable, on present policies, to one that looks sustainable?

Lord Blackwell: So it is that primary deficit that you are concerned about, rather than interest rate levels. Is it growth?

Charles Goodhart: One of the problems with growth is that, subject to what happens to migration, the demography of this country—and, indeed, the demographies of most advanced economies—is for the working population's growth to slow down and, in many cases, actually to contract. We do not know what will happen with migration, which is a key issue here. However, excluding migration, with quite a sharp decline in the working population, in itself tends to slow growth unless you get an offsetting benefit via a large increase in productivity. We all wish for a very large increase in productivity, but nobody has a blueprint for how to do it.

Lord Blackwell: We will come back to demographics in a later question. Sir Dieter, do you want to comment?

Sir Dieter Helm: As someone else has already commented, if something is unsustainable, it will not be sustained. There are two ways of solving this problem. One is to put public finances on a sustainable path ex ante. The other is to be forced to put them on a sustainable path ex post—after a market crisis, and so on. History suggests that the latter is much more likely than the former. There are very few examples of Governments who have seriously set about taking finances off an unsustainable path and putting them on a genuinely sustainable one. However, there are exceptions, and it is possible.

If we want to know whether a particular level of debt is sustainable, we have to ask, "Can the economy sustain it?" I refer back to my earlier answer: it depends what the debt is for. If we look at the borrowing that is projected going forward, in addition to the ongoing costs of public services, a huge amount of that borrowing is not for genuinely enhancing assets on the balance sheet; it is for capital maintenance. In the great growth period from 1945 to 1970, almost all the capital maintenance and a very big chunk of the investment in core infrastructures of the economy came out of current customers' bills and tax. So we paid as we went and honoured our bargain that the next generation would inherit a set of infrastructures, a health system and an education system that were in at least as good a state as how we found them. We paid it in the chain letter.

From 1980 onwards, we moved to a completely different system in which we will pay when delivered. Instead of financing these infrastructures, which are special to the productivity and performance of an economy out of the current generation's income—necessary, but not sufficient—we borrowed. We borrow for everything. We are going to borrow to fix school roofs. We are going to borrow to fix potholes. We are going to borrow to replace one energy system with another, but the output is still electricity that comes out the other end. If you look across the infrastructures, a lot of the debt is for maintenance that ought to be paid for.

These shortcomings are really quite damaging to the future prospects of the economy. Just the backlog in potholes is £14 billion, and that is just potholes. Lots of cyclists get injured and there are lots of car accidents, but if you look at the rest of the infrastructure, it is in a very poor state. The fact that it was privatised does not help UK plc. Ultimately, all these infrastructures are guaranteed by the state, and so are the returns to the investors.

So we have to ask: what has been happening to the state of the economy and what have we been using debt for in this context? If we look across the state of economy, we have lots of assets that are deteriorating. The other side of the debt, of course, is net savings after capital appreciation, which have been negative since the financial crisis—an extraordinary result for the economy. All investment in aggregate at the margin is coming from foreigners, not domestic sources. We do not save in the economy to handle these positions. We also have a current account with a balance of payments, which is in deficit, which means that foreigners have to lend us the money to live beyond our means to pay for the imports that we do not have sufficient exports to support.

That leaves us in a very difficult position, because the final point about debt is: debt with whom? There is a world of difference between debt owed to foreigners and debt owed domestically. Much of Japan's debt is internal. So is Italy's, actually. We now have almost everything at the margin being external.

There is a final straw in this frame, in answer to the question about what the economy looks like as a result. Transport for London is borrowing for its operating costs. That is not a sustainable position to take things forward. So at some stage the economy will have to deal with the state of its infrastructure. It will have to fix the leaks in pipes. It will have to fix the sewers. It will have to fix the state of the transmission system. It will have to fix the roads. It will have to fix the railways. It will have to fix the state of schools and hospitals. Oh, and there is the natural environment on top.

That is the liability: the decline of assets on the balance sheet, which the debt represents. So the balance sheet and the underlying state of the assets are weaker, and that is the condition against which you have to ask, "What's the sustainability of carrying the debt, and more debt, for the economy as a whole?" That is not the way people normally think about this, but I urge you to think of the stock of assets and the balance sheet as essentially core to whether the economy can sustain the kind of borrowing for capital maintenance that is by far the main consideration at present.

Lord Blackwell: To summarise what you are both saying, would it be correct to say that the concern is not so much the current level of debt to GDP but the trajectory, as well as the nature of government spending relative to taxation and what that will mean for the sustainability of—

Sir Dieter Helm: This can be solved. If the Government wish to raise tax by a substantial amount, they can handle their debt position. If they want to live within their means, they can do so. Whether you believe politically that it is going to happen, whether you think that the underlying trends are positive—"We're going to have high growth in the future", "We're going to have the highest growth rate in the G7", et cetera—or whether you think that the underlying demographics, which Charles is the expert on, point you in a different direction, you must in any event find the money to deal with the capital maintenance backlog for all the main infrastructures before you start to think about paying for defence, at around 4% of GDP, and paying for net zero and the other environmental components.

So you have large bills coming your way, and your borrowing capacity going forward to convince the markets that this is sustainable is not the same as it was when it was 36% or 38% at the end of the 1990s. It is 90-something per cent now.

Charles Goodhart: The trajectory is crucial. It would be a lot easier if we were starting from a debt ratio of 40% rather than a debt ratio of around 95%.

Lord Blackwell: What I hear you saying is that the real issue is not just the sustainability of debt but the sustainability of a viable—

Sir Dieter Helm: Economy.

Lord Blackwell: Spending programme.

Charles Goodhart: That, of course, raises the problem that, if we are going to raise taxes a lot, how we do that without hurting productivity?

The Chair: We will come back to that.

Lord Blackwell: Olivier, based on that discussion, do you want to add anything?

Olivier Blanchard: I have two reactions to what Charles and Sir Dieter have said. First, Charles is completely right about credibility. You have to start doing something now; you cannot say, "I'll do it next year". However, there are ways of doing that. You do some now and basically legislate for things that take place over time. It is a crucial issue. If you do not do anything painful now, you will not do it next year and it is not credible.

On r-g, again, Charles is completely right. We cannot assume that r-g will be zero or slightly negative. I think that is likely, but it is not sure. So you may have to plan to get not just to a balance but to a surplus, maybe 1% or even 2% of GDP. You can wait and see how it goes, but you have to be ready. There must a contingency plan.

On Sir Dieter's remarks, yes, the UK has misbehaved in the past, as have other countries. More should have been financed by taxes than by debt, but that is where we are.

In answer to your question, the way I think about it, you have a primary deficit of around 3% and you need to go to zero, or maybe to a slightly positive number for a surplus, but is it feasible? The main constraint is political, because it means making cuts in places that are very painful and costly from the voters' point of view. Now, if I look at the set of challenges across countries, it is in the mean. My sense is that it can be done, but, again, it clearly implies a number of measures that will not be popular. It clearly needs to be done, so I am reasonably optimistic that you can get close to it. I fully agree that vague promises are not the way to do it, but I think it is possible.

In other countries, it is a bit different. My country, France, now has a larger primary deficit and I am worried that it will have a very tough time. In the EU, the problem is actually the opposite: the new fiscal rules require a fairly fast adjustment of the primary deficits. I think it is too fast and that it will not work. It will probably mean fiscal consolidation and recessionary forces in the European Union in the years to come. I think they will go too fast. I am very worried about the situation in the US, because the primary deficits are very large and there is absolutely no attempt to decrease them in any way, shape or form. As we know, if there is trouble in the US, it has implications for the rest of the world.

It seems to me that the size of the challenge for the UK is reasonable. It has happened in the past and I think it will be solved—not nicely, but I suspect it will be solved.

The Chair: Brilliant, thank you. These are excellent answers, which have provoked supplementary questions from two of my colleagues.

Q151 **Lord Griffiths of Fforestfach:** We have talked about current trajectories, but if we look at the past 50 years or so, there have been two concerns in the UK: first, when the public deficit got out of control in the early 1970s; and, most recently, with Covid. If you are thinking of some debt-income ratio and you feel that prudence should be part of policy, to what extent do you think of reducing the optimal ratio of debt to income, maybe halving it? We now live in a much more uncertain world—that is a personal judgment of mine—of supply-side shocks than we did previously.

Charles Goodhart: In the 1970s, we actually reduced the debt ratio quite a lot through unexpected inflation. At one stage, as we will all remember, it was running at 25%. People had not foreseen that. The debt ratio came down quite a lot as a result, but we do not want to go there again if we can possibly help it. The 1970s were a lot nastier than anything we have had since then. There was still a bit of financial repression left, but not much. At that stage, we had g moving enormously faster than r, because nominal incomes were rising far faster than interest rates. My recollection, which is not what it used to be, is that the debt ratio was down to around 40% by 1979, although Lord Burns would remember the ratios much better than I would.

Olivier Blanchard: As a cost of taking some time, I will be brief. I think the hope of getting to 60% or any number like it is not realistic. It is short of financial repression on expected inflation. It will not happen. It is very hard to decrease the debt ratio by other means. It can be done, but it is tough, and 60% is just outside that.

The point raised is a very important one, and it is that the sort of once-in-a-century shocks have been happening every 10 years for a while now, and we have to take those into account, basically because they are largely the ones that have led to the large increases in debt ratios.

So yes, we should plan, but not for zero primary deficits but for primary surpluses that are sufficient so that next there is a once-in-a-century event, we are ready for it. The goal should indeed be a bit more ambitious than what I have said so far.

Q152 **Lord Layard:** As Dieter pointed out, we are borrowing in an international market. How important is what is going on in other countries when thinking about the urgency of reducing our primary deficit? Last week, we were told that we have the lowest but one debt-income ratio in the G7 and that currently—although Olivier said that this will change—we have the tightest fiscal position. Is that international context relevant to thinking about the urgency in the UK of reducing the primary deficit?

Sir Dieter Helm: Let me just make one point clear in response to the previous question. I do not think there is a right answer to the question of whether it should be 60%, 30% or 90%. To me, it depends what the balance sheet looks like. We could consume capital and sell off some assets, and then pay down the national debt, but we would not be any better off. So what I am really interested in is what this borrowing is for and whether it enhances the assets and is therefore a sensible thing to do or whether it is just borrowing for consumption. If it is borrowing for consumption, you have to ask why, for what reason.

As regards overseas, if you take, for example, the almost complete obsession with borrowing for net zero projects, the United States is borrowing a very large sum of money to invest through the IRA, the CHIPS Act, et cetera. A lot of assets are being created that have put enormous competitive pressure on anyone else wanting to build the same kinds of assets at the same time. It is now much more expensive—in fact, it is twice as expensive—to get a wind turbine as it was a matter of a year ago. So it affects the costs of the stuff that you want to finance by borrowing, as well as the cost of borrowing through the interest rate.

You have to ask yourself whether, after 30 years of almost negative real interest rates and very low nominal interest rates, in the period you are looking forward and asking about sustainability, whether in fact we have returned to what someone like me would regard as more normal interest rates. If you think, on the one hand, that the real interest rate has gone back—in my view, to normal—and, on the other hand, you think that the growth rate does not look very optimistic, then you look at the balance sheet and watch the speed with which we are consuming capital and writing down the state of the balance sheet, the number that you might arbitrarily select, like 90% or 60%, might look more worrying than currently appears in the numbers.

Finally, of the expenditures and liabilities on the balance sheet, pensions, a much greater defence budget, infrastructure and the precautionary position in respect of another shock are all factors that seem to me to be particularly pertinent for the next decade or so.

Olivier Blanchard: On Sir Dieter's remark, the debt sustainability analysis is the right tool to think about whether it is used for investment or for consumption and for revenues in the future or not. That is covered and, indeed, it means that some debt can be very bad and some debt can be justified.

On Richard's question, to a first approximation, no, but to the second approximation, the interest rate is determined to a large extent in the world—at least, that kind of interest rate—so what happens elsewhere has an influence on the world interest rate, although other countries can diverge from this for a while. If there is trouble in the US, surely that means serious trouble for all other countries if the T-bonds and T-bills do not remain safe or are not perceived as being safe. That, then, is a different world that we are in. I think it is a small probability in the short run, but it is not negligible.

Thirdly, in general, you have to worry about the proportion of foreign investors, because they tend to move faster, in and out. As far as I can see, the UK is more or less in the mean of more advanced countries. I do not think it is a big deal. That is why, in the end, the net answer is: do not worry too much about the rest of the world.

Q153 **Lord Lamont of Lerwick:** I want to ask about net zero and the impact of the transition on debt sustainability. Sir Dieter, you have written that the Climate Change Committee has vastly underestimated the cost of moving to net zero. I think its estimate was more than 0.6% per annum over 30 years, and this was assuming that the price of renewables continued to fall. What do you think the risks are, and what can the Government do about it?

Sir Dieter Helm: How anyone knows what the cost of net zero is over 30 years I have not a clue. Technology changes enormously. In my lifetime I started out with an Olympus portable typewriter, Tippex and carbon paper, so I do not think you should take estimates like that particularly seriously.

Lord Lamont of Lerwick: What do we think about the OBR saying that the debt-to-GDP ratio in 70 years' time will be 300% of GDP?

Sir Dieter Helm: Good luck to them. The serious point is that we will have so many shocks between now and then, so much technical change, that lots of things can happen. What you should focus on is making sure that your debt is sustainable in the short to medium term, and then the medium terms take care of themselves through time, except when you have some very long-lived liabilities like nuclear waste. But most liabilities fall within the frame.

On the cost of net zero, yes, I have always maintained that, first, we need to do net zero and, secondly, it is much more expensive than people imagine. The reason for that is because the calculation of the costs of the other technologies, particularly the renewables, does not properly incorporate the cost of intermittency or the fact that they are low-density energy, or the fact that they are distributed geographically very widely. I am very supportive of these technologies, but in the *Cost of Energy* review I did for the Government I asked that the calculations be done on the basis of equivalent firm power, so that the renewables would be de-rated by the costs that are associated with the back-up that has to be put in place when the wind is not blowing, and the cost of the transmission networks, et cetera. Then you get a very different number that appears out of these calculations. It is absolutely clear that renewables are not 10 times cheaper than fossil fuels, or three times cheaper. In fact, fossil fuel prices are falling very sharply. I think these are really quite expensive.

Secondly, in a very serious sense, swapping one energy system for another is not really investment: it is just capital maintenance of the assets through time. We want the service in perpetuity—energy, electricity—and we have decided that we have the wrong set of assets and we ought to have a different set. Why, by giving them the debt, should we make the next generation pay to replace the polluting system that we have run and polluted their environment with in order to get the investment to give them that system? That seems to me to be intergenerationally wrong, but it also seems to me to be an accounting error. And, yes, I think the costs are substantially higher. Offshore wind has doubled in cost in the last 12 months to £70 or £80 per megawatt hour, not incorporating the intermittency.

Finally, I will put it this way. If want an intermittent system with 50 gigawatts wind, you do not need the old capacity that we required, 70 or 80 gigawatts to meet total demand; you need about 130 gigawatts. That is how much capacity you need, because when the wind is not blowing, you have to have standby assets of gas, nuclear or whatever is there. I think all that is necessary, but I think it is delusional to think that it will pay for itself. It is a demand that, in my view, customers will have to pay. It should not come primarily from borrowing.

Charles Goodhart: The problem is that net zero is very popular until people get asked to pay for it. See what happens to the farmers who are revolting throughout Europe, because their subsidy on diesel has gone down. That is going to be a problem. Again, it is a political problem. If people do not want to pay for net zero, the only way to get it is for the Government to pay, and that raises the primary deficit even further.

Sir Dieter Helm: It does not help at all when politicians tell the public it is not going to cost them anything. They are all asked, "Are you in favour of addressing climate change?" "Yes, of course. It's not going to cost us anything. In fact, our bills are going to go down", they are told. This is nonsense, as they discover when the bills come in, and they revolt against each of the main measures that then confront them.

Lord Lamont of Lerwick: The cost of doing nothing may be even greater.

Sir Dieter Helm: I do not dispute that we have to do this. I am simply saying that the customers and taxpayers will have to fund, in one way or another, costs greater than were assumed to be the case by the OPR and others, because they got the cost of the new technologies wrong, and the direction of that error is very large.

Charles Goodhart: And it would be hideously unpopular.

Olivier Blanchard: I fully agree that there is a substantial fiscal cost to achieving anything close to net zero. We do not know exactly what it is. We know what we have to do today, but we do not know how long for and how much it will be in the future.

A major issue that has been raised by the different strategies on both sides of the Atlantic is whether you basically go the subsidies route or the carbon fees or carbon tax route. It makes a gigantic difference from a fiscal point of view.

Then there is the question of how you finance it. I completely agree that the public do not believe, or have not been made to understand, that it will be costly for them. That message has to be sent.

Given that, the political feasibility of financing what is needed at this stage for green investment entirely by taxes is not there. We saw this in France last week and we have seen it in other countries. Realistically, we have to accept that it will have to be financed by debt for a while—namely, the primary deficit will need to be a bit larger as a result. Sir Dieter may have other numbers than I do, but I suspect that, for the next few years, 0.5% more is the absolute minimum needed.

I still think it should be done. It is more important to do it and have debt a few per cent higher as a ratio to GDP than not to do it. Eventually, it will have to be paid by taxes, but for the moment, in the short run, this is one reason why I would accept a slightly larger primary deficit if the increase is partly compensated by measures in the usual part of the Budget.

Q154 **Lord Lamont of Lerwick:** I have a quick supplementary for Sir Dieter. You made it clear that you think that the pricing of renewables has been calculated wrongly. Would you apply that criticism to the contracts for difference mechanism? Does that in fact amount to a subsidy? Secondly, you have said that the Government should define what they mean by net zero. What is wrong with the way they have defined it so far?

Sir Dieter Helm: Those are two separate questions. CfDs just exclude all the intermittency costs. They are the average cost for that unit delivered to a system that has to absorb the cost. Building the supergrid, the offshore grid and all those things are not in the CfDs.

On net zero, a statement was made at the beginning of the Climate Change Committee's recommendations to the Government ahead of the Climate Change Act 2008 (2050 Target Amendment) Order 2019, which set the 100% reduction, that, when we get to net zero, we will no longer be causing climate change. That is utter nonsense. You can see from the last couple of months—I once explained this to Boris Johnson, actually—

that if you really want to get your territorial carbon emissions down, which is our target, the best thing to do is to close the steel industry, close Grangemouth petrochemical plant, hope that the car industry dies and just import the stuff instead.

Port Talbot is a classic example. They are closing the furnaces and doing some exciting things instead, but they are not going to produce the same volume of steel. If we want steel, perhaps for our new defence forces, we will now have to buy it from China. That steel is coal-intensive; climate emissions go up as a result of deindustrialising and importing the stuff instead. It should be on carbon consumption, and the carbon border adjustment is one small step on the way.

By the way, our carbon consumption—our genuine footprint, given that we are almost a completely deindustrialised economy now and we are all services and we import so much of our energy-intensive activity—is very much bigger than our carbon production. We delude ourselves that we are climate leaders. We are not. If you want to get the numbers down a bit further, as I once explained to Boris Johnson, just go around and take off the last of the intensive industries. We close most of the fertiliser, aluminium, steel and petrochemical industries, and we import the stuff instead. That is why the numbers do not tell you anything particularly sensible. Oh, and by the way, we do not include Drax's emissions in our territorial numbers either.

I am serious. You could not make this story up. How best do we develop our resources to address what I think is an existential problem, which is climate change? We should work out how to spend our resources to get the best climate bucks for our money. That is not what we are doing.

Q155 **Baroness Liddell of Coatdyke:** Richard Hughes from the Office for Budget Responsibility was quite specific about the timescale he was looking at for long-term debt sustainability. He was looking over the lifetime of the next Parliament. Given that it is just around the corner, and will probably begin around the end of this year, how feasible is that? What are your expectations of government in the medium term? He was quite specific in saying that there is a window of opportunity over the next five to 10 years to take action in these areas and to deal, for example, with the demographic issue of the falling birth rate and rising ages. Is that sustainable and realistic, or is it just hoping for the best?

Charles Goodhart: Everyone is always going to hope for the best. From listening to Dieter, I keep wondering whether he thinks that border adjustment taxes are feasible and are a route we should be going down. I hope that the EU is going down that route. I believe it is a route that we should probably all be going down.

Sir Dieter Helm: The framework is legally in place in the EU already and we are going down that route.

Charles Goodhart: It is a question of whether you think it will work for the purposes we want it to. If so, it is one of the things that ought to be done in the next five years. We have all been talking about the many expenditures that we cannot do other than go on making—for infrastructure, climate, defence, whatever. So we have to move on the question of what taxes are feasible.

Taxes on capital will not do, because that would cut back on investment and, of course, capital is very mobile. Taxes on labour will not do, largely because they will be hideously unpopular politically. The one area that is not taxed, or not taxed properly, is property and land. I very much hope that any future Government will switch taxation on to that area. The first thing a new Government should do is have a revaluation of property and land as soon as they get in. Basing property on 1991 values is just ridiculous.

The Chair: Charles, you said in answer to Baroness Liddell's question, that we are heading for a fiscal crisis. I think Richard Hughes was saying that we need to take action of some shape or form in the next five years, or possibly a little later. This inquiry is more about how sustainable our debt is than what we do about it. If we do not take action and level with people about the hard choices they are facing, will we face the fiscal crisis that you are talking about in the next five to 10 years?

Charles Goodhart: I do not think anyone can tell. I very much support Olivier's statement, with which I fully agree, that conditions in the United States are, in many ways, worse than they are here. That is partly because nobody on either political side is talking about this problem very much, while it is under serious consideration in this country. If there is a crisis, which could easily happen in the US or in other countries, it would come back on us, because the concern about the safety and sustainability of British government debt would arise if other government debt, particularly US government debt, suddenly came under a cloud. Again, the question is what might cause that and when it might happen. If I knew the answer, if I could tell the future, I would not be here now.

Q156 **Baroness Liddell of Coatdyke:** Are you suggesting that there is financial repression?

Charles Goodhart: We may be moving towards that. As you know, my colleague Paul De Grauwe has been arguing very strongly that interest payments to commercial banks should be cut back very largely so that the intramarginal holdings and reserves by commercial banks with the Bank of England are paid zero interest and interest is paid only on marginal reserves. You only pay interest on marginal reserves, which in a sense, considering that the reserve basis of commercial banks has been expanded enormously by QE, would in effect be a tax on the banks.

One of the problems that would raise is that financial repression does not really work unless you have exchange controls, which I do not see being introduced in a hurry. Without exchange controls, if banking is less profitable in this country, a lot of it will simply move offshore. This is one of the reasons why repression is probably unlikely without exchange controls. I do not see the situation being nearly bad enough for us to introduce exchange controls, certainly not at this stage and almost certainly not within the next five years.

Olivier Blanchard: I have a few points to make on the questions that have been discussed. The use of DSA is reasonable over the next five or 10 years at most. After that, it is impossible to know. You see projections going to 300%—I saw similar projections for the US at the time the debt was actually going to zero—but we basically do not know enough. We know that there are demographic issues. If we start to reform the retirement system now, there is a good chance that the books will balance in 10 to 20 years, and that is probably very urgent. We do not know exactly what it will do, but that should be very high on the agenda.

I do not believe there will be a crisis in the next five years. Even if Governments misbehave, I think we will see increases from 100% to 110% or 120% of GDP. The markets will probably not be happy. There might be a spread, but I do not see a big crisis coming, except, again, for the US, where it will happen at some point. Whether it is in five or 10 years, I do not know.

Let me just take a point that is marginal, but the issue was raised. On the carbon border tax, it is a solution to the CO_2 problem. It is absolutely not the solution to the competitiveness problem, which is that if one country uses a subsidy and the other uses taxes, and they both reduce CO_2 to zero, there will not be carbon border taxes because they have reduced CO_2, but the country that was subsidised will have an enormous comparative advantage. The exchange rate will move a bit, but this will be the source of major commercial wars. I am happy that it is introduced, but it is not the full solution to the problem.

Sir Dieter Helm: Let me come back to whether it is sustainable over the next five years or so. For me, the issue in this dimension, apart from the issues I mentioned in relation to capital maintenance and the infrastructures having serious problems, is the pressures on public expenditure. It might sound like an odd remark to make, but one of the questions I ask my students is: if you spend this much money on social security, how are there any poor people?

Another way of putting that question is: if you have a health budget this big, why are the outcomes so weak? One of the things that a debt crisis or a fiscal crisis in a Government causes is that if the Government realise that they cannot raise taxes further—I think the resistance to tax increases will be very large—instead of just thinking about how, salami-like, you might remove bits of public expenditure, there is another other way of handling an unsustainable debt position, which is to get yourself into an expenditure position that is sustainable.

Given that you have the upward pressures on expenditure anyway because of the demographics et cetera, and for the advances in science et cetera, a really serious look at reforming social security in its broader sense and the health system may be forced upon Governments, and that, in my view, is a good consequence of a debt crisis.

So there is an upside to this as well as a downside, but I think it is the expenditure side that will have to be looked at, rather than the tax side, and that is where the politics will get difficult. I do not think the tax side is plausible.

Q157 **Lord Burns:** It has come up several times that interest rates are a key variable in this debt-sustainability equation, and we have heard about the importance of world interest rates. Charles, I enjoyed reading your 2017 piece on this, setting out the importance of the Chinese economy and demographics for what has been happening to interest rates. You wrote this some time ago and I think it reads very well today, but I would really like to know to what extent have you changed your views since you wrote that? Have you developed them at all? Do you think the argument still stands, or do you have anything to add?

Charles Goodhart: One thing we did not foresee was the surge in migration. The UK is slightly special and slightly different because of the vast number of disabled people. We did not really foresee that type of thing. We did not see the very large surge in migration—mostly legal—that has occurred, so the labour market is actually not quite as tight as we thought it would be.

The other issue is that it is possible that China might get itself into such a mess that the only way it can cope is by cutting the price of Chinese goods to a point where it goes on exporting and goods prices go on going down, which we had not seen happening.

In terms of inflationary pressures, particularly from the supply of labour, there are two reasons why we were overly pessimistic, in the sense that we thought there would be more inflationary pressures. That said, of course, in almost all the advanced economies, labour markets remain pretty tight despite the increase in interest rates. Although the timing of the move back from the supply shocks means that inflation over the next two or three months will come racketing down, possibly back to target, it is very unclear that, on present policies, that inflation will stay down, particularly if interest rates are reduced as it comes down.

My best expectation would be that the average rate of inflation over coming years will be 3% to 4%—that sort of thing. Again, it depends in very large part on what is going to happen in migration, because the very surge in migration may have helped economically, but it certainly causes problems politically. Whether our society can happily sustain migration of an extent necessary to keep the working population from declining quite sharply I simply do not know.

Q158 **Lord Burns:** Is there an implication for real interest rates in the medium term?

Charles Goodhart: I think I agree with Olivier. From having been negative, you are likely to get something like 3% to 4% inflation, 1% to 2% growth, and nominal interest rates at about 5% on average, so real interest rates on the order of zero.

Olivier Blanchard: This is one of the rare cases where I agree with this point of view. Charles has been writing about the role of demographics and how it might be a challenge, and on this we have had different views. My own view on real interest rates—interest rates adjusted for inflation—is that I cannot dismiss the fact that they went down globally for 35 years, and much of the increase that we have seen has nothing to do with traditional causes; it has to do with the fight against inflation.

Once the fight is won—or nearly won, as Charles noted—the question is: what do we go back to? It seems to me that many of the factors that were there before and were used to explain the decrease over time are still there: demographics are still playing that way; and the China part is less important, but it has been less important for a while.

There are two big issues. The first is AI. It is not crazy to think that AI will increase productivity growth and therefore increase the growth rate. In the process, it will probably also increase investment demand and the interest rate, so I think we might see a slightly higher r but a larger increase in g, which would be good news from a fiscal point of view. The one that is less good news from the fiscal point of view is green spending, because it does something to r to the extent that we actually do more public and private investment, but it does not do much to g, or at least to measured g. That is a point that Dieter has made. It is not going to increase growth, and there are some arguments that it may actually decrease growth; in which case, things could be worse. Again, my best guess is that, at this stage, r-g is probably, again, close to zero. I would expect it to vary and become a negative a bit, probably not as much as before Covid but close to zero negative.

Sir Dieter Helm: I very much agree with the overall frame. The only thing I would add is whether there is a debt premium and the UK will have to maintain a level of sterling against the euro and the dollar. Traditionally, it has been 1%. After Brexit, it would be very surprising if that went away. My guess is probably a 1% premium on top.

Lord Burns: This takes us back to the argument that, if that is the case, as I understand it, it puts all the pressure on question of the primary surplus. We are not going to be bailed out by r-g.

Sir Dieter Helm: We are not going to be, no, I agree. I suspect that I am more pessimistic about how this unfolds than Olivier and Charles, but that is because I am really worried about the state of the balance sheet.

Q159 **The Chair:** We now have a question about geopolitical developments, which we have touched on a bit. Let me try to crystallise what I think and put a simple question to you. Should we be more concerned about debt sustainability through the prism, first, of what is happening in the US and, secondly, of what is happening in China as regards Chinese growth? Charles, would you like to comment briefly on that? We have touched on a lot of this, but, on those two points, should we be looking at the US, China and this issue more through that prism?

Charles Goodhart: We have already touched on that, in a sense. Those are the two really major countries, economically speaking. What happens in them will be enormously important to the world and to us.

The Chair: Fantastic. Dieter, Olivier, is there anything you want to add on this? No? Let us move on then.

Q160 **Lord Turnbull:** This is not a question that was originally allocated to me. I am struck by the vocabulary with which the public debate is taking place: we have "net zero", which, as Dieter explained, is based on territorial emissions, not global carbon consumption; the Chancellor has talked about "investment", when in fact a lot of investment is just current spending or maintenance; we talk about "strike prices" for renewables when we should be talking about the levellised price and so on; "r-g" will not appear in the Budget speech, and "primary deficit" and "primary surplus" will probably not appear in that speech. Do we not have to reconstruct the metrics around all the debate that is taking place, because it is not talking about the right things and is not defining them correctly?

Sir Dieter Helm: That is exactly what I think. I would put it this way. In the sustainable economy, which I tried to describe in my book, on Budget day the Chancellor would present the accounts, which would show the current account and the capital account or the balance sheet. On the balance sheet would be the assets and the liabilities, and that is what the debt against the assets would be for. There would be additional debt if genuinely enhanced additional assets—not replacements or remedial expenditure or capital maintenance—were added to the balance sheet. Capital maintenance would be deducted from the current account of the Budget so the Government would have their tax revenues and other revenues coming in, and their ongoing current expenditures, and capital maintenance would be subtracted from that.

The sophistication, or the complexity, of it is the pretence that we have taken a whole set of assets that were on the Government's balance sheet and pretended that they are private. All the infrastructure and utilities are treated as nothing to do with the Government's fiscal position and the accounting position that they present. That is a nonsense, first, because the Government are the backstop for all infrastructure anyway and cannot afford for any of these assets to fail—as they may well find out with Thames Water very soon and as they found out with Railtrack, et cetera—and, secondly, because it does not give a true record if you exclude all this stuff from the state of the economy, from the perspective of whether the economy is sustainable through time.

That is the accounting framework that I would use, and then I would work back to the analysis of the debt that we have had, including how much of the assets deteriorated on the balance sheet. I would then be very worried about future liabilities. Pensions are obviously a huge liability that should be taken into account. It turns out that quite a lot of the defence budget is pensions, as an example, but there are lots of other liabilities that are not fully accounted.

So we do not actually know the true state of the Government's liabilities. We do not know what the Government's balance sheet really looks like, and we do not know what an honest version of it would look like if the current account component of this set of accounts properly reflected the capital maintenance.

Our national income accounts, like those of the United States, were developed in the middle of the last century. They are for Keynesian purposes. They are for looking at flows and balances. They completely abstract from assets and stocks. My approach would focus much more on stocks and assets in looking at the sustainability of the economy, rather than what the current flows, in Keynesian terms, may look like.

That is different view from that of the vast majority of economists and the way in which these things are currently presented, but the liabilities do not go away because you pretend that they are not really liabilities; they are there, whether they come from the demographic side or from elsewhere.

Q161 **Lord Turnbull:** Is this a feasible project? At the moment, the aspiring alternative Government seem to be using the same fiscal rules and trying to do exactly what Gordon Brown did in 1997—"We'll take the rules as they are"—but it is a completely different world. I do not see any new thinking or appetite.

Sir Dieter Helm: The big accounting game that Gordon Brown used, which has been used by this Government and is bound to be used by the next, is to start to redefine current expenditure as investment. This was the great endogenous growth: by classifying health and education as investments, your golden rule of borrowing only to invest is easy to meet. We did it with PFIs, too, in large measure. Those kinds of accounting games are absolutely common between the parties. I struggle to see much difference between the parties; I see that Labour is now committed to the triple lock as well, so it is hard to see how the components of this will play out. In my view, the framework is not one that gives a good insight into the state and sustainability of the economy and, therefore, the sustainability of the debt.

Olivier Blanchard: Briefly, I think that looking at balance sheets is extremely useful; I am all in favour of it. However, I repeat: a well-done DSA—debt sustainability analysis—will basically deliver the same answers and indicate whether what is spent will lead to higher revenues in future, whether the capital maintenance is taken into account well, and so on. I do not think that these are alternative views; at this point, the DSA is probably more popular than this alternative. However, it seems to me that, if done well, such an analysis will achieve the same objectives.

Charles Goodhart: The valuation of assets and of liabilities that are likely to occur in future will be very uncertain, and certainly manipulatable by firms of accountants. Balance sheets are works of art.

Sir Dieter Helm: I want to add one final point, which my colleague Colin Mayer has made. Quite a lot of the core infrastructure's assets to the economy and for the natural environment are assets in perpetuity, to a first approximation, so you do not have to value them. What you have to value is the capital maintenance to maintain them intact. There is a really big shortcut here that stops you going round and working out the value of this tree, this valley or this bit of natural capital.

You do not need to do it. We will need an energy system that provides electricity to people for the century. We are going to need water, sewage and transport systems. They are going to change their configurations a bit—we might have electric rather than petrol cars—but we can basically assume that these are assets in perpetuity in current-cost accounting, with no depreciation, just capital maintenance. That greatly simplifies the accounting problem. It is the point that Ian Byatt made a long time ago, in the Byatt report, back in—Terry might remember this—1982 or something of that order.

Lord Burns: Just to emphasise, capital maintenance is a current account cost.

Sir Dieter Helm: Yes, that is exactly my point, and it is treated almost entirely as an investment. The proposals of the Opposition, as with many of the Government's proposals, are to do things like borrowing to fix the school roofs, the potholes or the tile that has fallen off. No, that is not how you should think about it; they are ongoing, current costs. That is why the accounts with which we are presented are misleading and why I asked the question. The sustainability of the debt depends on what the debt is for. If it is being used to pay for current spending or capital maintenance, that does not seem to be a sustainable policy.

Q162 **The Chair:** I want to come back to the question I posed to Charles, because I am hearing that we are fiddling the figures, to a point. We are also not being honest about the challenges that we are facing. At the same time, I am hearing that, somehow, we can just muddle on through and are not going to have a crisis. I am not sure exactly how we define a crisis but, playing devil's advocate, somehow it does not matter if we can just muddle on through; we do not need a profound restructuring of the state or an increase in taxes. Is that right? I am hearing conflicting things or maybe I am misunderstanding what you are saying.

Charles, in that article written about your interview in December, you said that we are in for a fiscal crisis and that we do not know how to solve it, but I am hearing something slightly different from you today. That is my sense, but maybe I am wrong.

Charles Goodhart: No one can foretell when a crisis is going to occur. The point has been made that the trajectory is what matters, and we are starting from a position in which we do not have much to spare. We do not know how much we may have to spare.

The tendency is still to believe that we will go back to a world in which interest rates will be very low for longer—sufficiently low, particularly if growth can be obtained somehow, that g will be significantly greater than r. That is hopelessly optimistic for a series of reasons. If g is equal to r, as Olivier has been saying, to make a bit of spare room we should go for a primary surplus, excluding net zero, about which Olivier also talked.

When the present decline in inflation has come to an end, which it will, and it starts rising a bit again, and people then see that lower for longer is not likely and that the trajectory is quite bad, I think there will be a serious reconsideration. No one can foretell crises, but the possibility of a significant increase in long rates relative to short, at some stage in the next five years, is more likely than not.

Sir Dieter Helm: I agree. That probability has gone up, but we cannot know with certainty. My reasoning is to do with having run out of road for the decline of the asset side of the balance sheet, but the trigger for a financial crisis is more likely to be political than economic.

Look out over the horizon: the European elections are coming up, with the right and far right. We have the American election, then the German election and the AfD. A bit further out, we have the French election. We have to ask how sustainable this is going to be in a world where we have a right-right Government in Germany, a right-right Parliament in Europe, the prospect of Marine Le Pen, and Trump or his equivalent on the other side of the channel. That is the US side of this calculation. How does one realistically believe that the politics will allow any of those Governments to address the fundamentals of the financial challenges? My guess is that the politics will trigger, but the underlying balance sheet has deteriorated substantially. That says to me that its robustness is much lower than is reported by the 80% or 90% debt-to-GDP ratio, which is not a number in which I am particularly interested.

Olivier Blanchard: This is a political science question, and I am a foreigner to the UK, but my best guess, my baseline, is that there will be a series of minor fiscal crises. The Government will offer half-credible measures, some of them listed in the OBR, which will not be enough.

Again, the size of the problem that the UK has to resolve is not gigantic, at least in the next five to 10 years. The primary deficit has to be reduced by an order of 2% or 3%. That is doable, but it will be very hard politically, so the Government will not do enough. The rating agencies will come in and say, "We don't like what you're doing and are going to downrate you". Either the Government will do something or the downrating will take place and make the interest rate a bit higher. Then there will be increasing pressure to do things.

My sense, historically, is that this challenge can be met, even taking the political constraints into account. I expect a series of small fiscal crises, the same as I do in France. The fight between the rating agencies and the ministry of finance is coming and it will lead to a small adjustment and more and more measures. In the end, you will not quite be there, but you will not be too far away. My best guess is that we muddle through.

Q163 **The Chair:** Does the structure of the UK's debt at the moment make us more vulnerable and susceptible to those shocks? We have heard a lot about that; the OBR highlights it in its fiscal risks review from July last year, in talking about maturity.

Olivier Blanchard: There are two dimensions to that. The first one is the decrease in maturity due to QE and the fact that the central bank liabilities are instantaneous. That clearly means that any interest rate change goes through much faster; that is not a big deal, but it complicates the dynamics. There is less chance to adjust when there is an increase in the base interest rate.

The other dimension is the investor base, to the extent that you have foreign investors and they are harder to satisfy, because they have more options. They may like your country or they may not. That is a major issue if you are Brazil, but it is not a major issue if you are the UK. The proportion of debt held by foreign investors is less than 20%, I think. Standard investors will go to Brazil; they are happy to have some UK stuff. I do not think that that is a big issue.

Sir Dieter Helm: My guess is that historians will not be kind to circumstances in which, when the real interest rate was negative, we did not borrow a lot to make the necessary investments in our economy and enhance the balance sheet. I do not think that interest rates will be what we experienced in the last 30 years any time soon. If we are short rather than long, the results will play out. It is not good news. It is not the biggest issue, but it is not looking particularly pretty.

Charles Goodhart: I think that Olivier is right in that we are not actually the worst. This problem is facing virtually all advanced economies. It is a political problem with democracy. In democracies, Governments do not like to cut public expenditures or to raise taxation. It takes a hell of a lot to get them to do it, and, sooner or later, some of the countries, as Olivier was saying, are going to face possibly minor fiscal crises. It will feed back to us, whether or not it actually occurs here first.

Q164 **Lord Rooker:** What Charles has just said also applies to the refusal to modernise a tax system. You raised the issue of revaluation, which should be announced on day one—in fact, a witness sitting in that chair last week said it exactly the same thing. In 1990, there was the problem with the rates and the poll tax; it was not the intention that we would last for 30 years with 1991 figures. Most of my stuff has been raised, so I am just pinching something from Lord Turnbull. I am relying on memory here, but I do not think Gordon Brown did not tell the country before the 1997 election that he was going to abolish advance corporation tax.

That created, if I remember rightly, a nice little kitty that was sustainable because we were promised the Government's fiscal rules would be kept to for two years. Abolishing advance corporation tax may have had an effect on funding pensions later on, but it gave us a kitty that enabled things like Sure Start and other matters to be done. I keep living in hope that the present Opposition have got something like advance corporation tax up their sleeve that they can do on day one and create money.

You have covered my question a lot, but maybe you could summarise. The long-term projection for the OBR is based on this steady rise in the dependency ratio from the 2040s onwards, but what confidence do you have in the demographic assumptions that underpin the official debt projections? You have touched on migration, mentioned the vast number of disabled people, and we have massive numbers with preventable ill health; we are relying on those assumptions that underpin the projections. Is there any confidence in doing so?

Charles Goodhart: There is quite a lot of confidence in the pure demographic outlook, excluding migration. After all, the number of British-born workers who will be available to enter the labour force in 20 years' time is pretty well-known, because the births now are going to provide the workers 20 years down the road.

Do I have any clear appreciation of what is likely to happen to fertility rates? I do not know, but the trend has been downwards; it can change. I am not sure that any of us quite know exactly what has caused that downwards trend and whether it will go on—it can go on. It has already had an impact on the Asian economies; the fertility rate in South Korea and China is less than one—it is about 0.7. Unless it goes up dramatically—and I think that very unlikely—the ratio of dependants to workers is going to worsen. That is almost certain.

What is expensive is not people who are old like me and are capable of doing things. Old people do not go on holiday or travel so much, or spend so much. The problem with ageing and the dependency ratio is the number who are incapacitated. It is poor health rather than age as such that really matters. If there is one development that would really change the path for public sector expenditures, particularly on care, it would be whether medical science can cure the neurological diseases of the old, Parkinson's and dementia in particular. The problem is that people do not die rapidly from them; they become incapacitated, need care—which is expensive—and medicine, and they hang on for really quite a long time.

Also, inequality is particularly marked in health. More deprived areas have a much earlier stage of people getting into a condition of incapacity, and it is incapacity, rather than age as such, that is really expensive.

Sir Dieter Helm: There are a couple of points to add. First, migration has costs as well as benefits. Quite a few of the pressures in certain areas on public services—schools, housing, et cetera—knock through into productivity and the rest of the economy. We need a nuanced analysis of what this amounts to.

People do not seem to comment as much on the fact that the median age of a voter is getting older. I observe that political parties looking for votes continue to commit to things like the triple lock. There is no evidence that older voters are voting to sacrifice some of their welfare for the benefit of the young—quite the contrary. It is the politics, and therefore the impact on public expenditure that comes from that, and the unwillingness to adjust accordingly, which makes your problem of the sustainability of public finances much more difficult. We could raise the pension age for anyone who passes a health test to 75, if we wanted to do that, or we could raise it to 69. There is nothing stopping us doing that, except that it seems to be politically extremely difficult to do these things. From a fiscal point of view, we should just assume these burdens get higher and things like the triple lock will remain in perpetuity.

Olivier Blanchard: Charles has already said all the important things. There is uncertainty about the fertility rate and the degree of incapacity, which depends both positively and negatively on medical advances, depending on the form they take.

We still have to think about where we want to be in 2050, or 2070, and so the idea of starting a contingent reform—with very generous grandfathering so as to avoid some of the political issues that are raised when you try to do it too fast—should be very high on the agenda. I am always struck by the fact that Italy—of all places—basically did such a reform many decades before it was needed, and it went very smoothly. It is not today's issue, but it is today that we should be thinking about it.

The Chair: Just to be clear, if we do not have net migration running at about 300,000, which is what the OBR is projecting, and we do not address the state pension age to address the worker-dependency ratio, what impact does that have on debt sustainability? Please be very precise, Charles, on what will happen if we do not do those things.

Charles Goodhart: A lot of people who are in receipt of public sector expenditures: the old—particularly the incapacitated old—collect pensions, get care, medical care and medicine. Let us remember that incapacity hits several ways, because it takes workers away from producing goods and services of the normal kind, because they have to look after the old. I fear that it is unlikely that AI or robotics will do much in that field. Those who have incapacitated relatives know that what the old really want is human empathy. That is very difficult for a robot or AI to produce, and you are taking people away from the workforce to look after them.

Q165 **The Chair:** On worker participation, I note that the Japanese levels of worker participation for the 55 to 65 year-old group, as well for 65 year-olds, are a lot higher. Should we be looking at what we are doing for that age group much more as a public policy imperative and redefining what we mean by "old age"? Is that something that we should be thinking about?

Sir Dieter Helm: We should think about it irrespective of the economics of it. I do not know what number of the working-age population is currently not working, but it cannot be net positive for them to be out of the workforce and out of participating in society more generally. This is not my area of expertise, but it seems to me that there is an enormous general welfare problem at stake.

Then there is the labour force itself. In working out dependency ratios, if we take 20% of the working-age population and cross them off, making them a liability because they attract public expenditure but do not contribute to the taxation returns, we are bound to make things significantly worse. Imagine a society in which people do not really join the workforce until they get to 20 or beyond then leave it at 55, which is what is happening in a lot of cases: that is a pretty small base to carry the aspirations to pay for not just the health service, education, local government and building houses but the whole of net zero, biodiversity and all the other things on top. It is intuitively implausible that that can be sustained. In addition, it is not socially good to allow that to happen. I struggle with the idea that 9 million people in the working-age bracket are not able to contribute to the economy and would not want to do so.

Olivier Blanchard: I do not know the UK numbers, but I know the French numbers. It is a gigantic issue; the very low participation rate of people aged 55 and over is one of the main issues that the Government want to tackle. It would make a large difference socially, economically and fiscally if we could do something, which is not obvious.

Q166 **Lord Razzall:** I will ask a question that all three of you have touched on tangentially in answers to other questions. Perhaps this is an opportunity to summarise your views on it. How should we measure our national debt? Would a balance sheet approach be more appropriate, rather than traditional debt as a percentage of GDP? Dieter, you have expressed quite a lot of views on this in your answers; perhaps you could just summarise them for the record.

Sir Dieter Helm: For the record, the answer is yes. There is a difference between Olivier and myself on whether this would produce the same answer as what I would describe as the conventional approach. I am not sure that it would; part of that is because my approach would require us to look hard at the state of the assets and not suddenly discover that sewers, et cetera, do not work, as has been turning up on a regular basis. It is quite extraordinary how little we have known about the state of our broader assets within the economy. Take schools. How is it the case that we suddenly discovered that most of—a substantial number of—the roofs were not up to the job and would need to be replaced?

My approach does not just produce different answers to these questions; it also motivates asking questions that are not conventionally asked by Treasuries. For example, it has come as a great shock to discover that we have to spend more than £10 billion on fixing the sewers and £14 billion on fixing the roads—and that is just the potholes. There are also no realistic estimates of what it will cost to electrify the transport system with the networks, et cetera, that are required. I would like to know what those numbers look like so that I could look from now out to, say, 2040 and say, "Among the things this economy's going to have to absorb, these are the kinds of expenditures that look like they're coming. In the meantime, if we don't have any savings domestically, this is what we're going to have to ask foreigners to do".

Let me give you an example on that front. Take offshore wind, which we referred to earlier. Almost all the offshore wind is foreign owned, so profits and dividends do not accrue to the UK. Almost all the investment is from foreign savers and almost the entire supply chain is made up of foreigners. Foreign companies borrow from foreign investors sums of money that they then spend on foreign supply chains to erect wind turbines. This is massive expenditure; we are talking about 50 gigawatts of offshore wind. These are the sorts of things that a part of the frame.

I would add one final thing to this. I am worried about the balance of payments and its sustainability. I am concerned about how far sterling will need to be defended by higher interest rates—as was the norm prior to North Sea oil, which is now over. The peace dividend has gone, the period of very low real interest rates has gone, and North Sea oil and gas have gone. We are vulnerable on all those component parts. My guess is that, at some point, either we will have to maintain this interest rate premium, which is what we are doing with Europe at the moment to hold the exchange rate at €1.16 or €1.17, or we will have to do more on that front. That is the question.

Having covered the territory, the simple answer to your question is yes.

Q167 **Lord Razzall:** I think you answered this earlier, but on the balance sheet approach, how do you value a new school if you take a balance sheet approach for that purpose?

Sir Dieter Helm: Again, I am not interested in the value of the schools. I do not want a valuation. What I need to know is what it costs to do the capital maintenance. If a school that we have at the moment is falling down and has RAAC in the roof that we must replace, we are not better off in investment terms in having a school that is carrying out the functions that it was carrying out before. This is replacement maintenance. All I need to know is: have I made that adjustment? That is in the current account; nothing happens on the balance sheet.

If I say, "What I want to do is build a brand-new university", and this would be an asset enhancement, I would add to the balance sheet the value of that project's cost. The debt would sit on the balance sheet next to that, along with assets and liabilities. For the core infrastructures and for the natural environment, these are assets in perpetuity so it is about capital maintenance only; what you must not do is capital depreciation, which is what we have been doing and which is why, since the last financial crisis, the savings ratio is negative as opposed to positive. We have not been saving and we have been eating up the capital, which is what capital depreciation does. Those are the adjustments that I would make on the balance sheet.

Lord Razzall: Charles, I am not sure that you entirely agree.

Sir Dieter Helm: I am sure that he does not.

Charles Goodhart: No; I am a bit sceptical. After all, the capital maintenance on a bit of equipment or a building changes over time, so you cannot just take the present capital maintenance—you have to have a projection of what it will be in future. That projection is extremely uncertain. The present value of future capital maintenance will depend on the path of interest rates, which is also very uncertain. I would back any group of accountants to come up with a nice balance sheet that looks as dodgy as anything that we have at the moment. I like what you, Dieter, are doing but I think that the world is going to be too uncertain. The future is not known. The value of something now depends on what will happen in the future, and we do not know that.

Sir Dieter Helm: Let me give you an example. If you have a house with a roof on it, and tiles come off from time to time, do you find it impossible to make a reasonable provision on what it will cost to maintain that house in a good state? The answer, I think, is no. There are a huge number of things in the public sector and in privatised utilities. It is not rocket science to know what it will cost to repair the pipes in the water industry. You may make provision for an allowance for what you assume the cost will be; I would have that in the accounts. It may turn out to be lower if technical change makes it easier to fix the pipes, but it is not that difficult.

Charles Goodhart: Yes, but let me give you a counter example. In your balance sheet approach, what do you think the value of HS2 would have been over the past five years, and what should it be now?

Sir Dieter Helm: The value of HS2 over the past few years is a cost; it is just what it has cost. We are going to have a railway from possibly London to Birmingham at a price, a cost, of £0.5 billion a mile. Just think about that number and recognise it: it is £0.5 billion a mile to get from London to Birmingham.

The good thing we know is that we can provide that service at a remarkably lower cost than £0.5 billion a mile with existing railway line. Of all the things that HS2 is, it is not a serious addition to the capacity on that line. The purpose, the question to which HS2 was originally the answer, is how to form an interconnected European railway system. The essence was that HS2 would go straight through London to Birmingham, Manchester and Edinburgh. We have reneged from that and, as we have done that, reduced the value of the project substantially. This is an example of a cost that is vastly in excess, I would argue, to the likely benefit that we are going to get.

HS2 is a big, separate question. A different question to ask is the value of Crossrail. It is a pretty predictable and clear project, but it is an asset in perpetuity; I do not want to know its value. All I want to know is how much it will cost to maintain Crossrail for the next 10 to 15 years' time and how I adjust that in the accounts. It is really easy, to a few million either way. You could have a contract with someone to do the maintenance and tell you the answer.

Charles Goodhart: Do you think anyone would have foreseen problems with the Central line?

Sir Dieter Helm: Do you mean 100 years ago or whenever it was built?

Charles Goodhart: No, I mean last year.

Sir Dieter Helm: Any infrastructure has a contingency fund. Things go wrong, so you need to make some allowance. There is a difference from saying that it is uncertain; of course, it is uncertain. The question is: within the bounds of reason, looking at the kinds of maintenance costs that are coming forward, is it possible to look at the government accounts and ask whether we are in a reasonably sustainable position or not? Yes, of course we can answer that question and the answer is no.

Olivier Blanchard: If we are interested in debt sustainability, the right tool is debt sustainability analysis. There is no reason to look for something else. All the arguments that Dieter has given can and should be handled in a debt sustainability analysis, taking into account the future capital maintenance. If HS2 costs a fortune, does it yield much revenues in the future? That will show up. That seems to do the job.

At the same time, I like what Dieter is suggesting, because it raises other issues about the balance sheet, whether the Government have the right assets, whether they should dispose of some and so on. I am very much in favour of the exercise, but I see no reason to use that to think about debt sustainability analysis.

Lord Burns: One thing on which we can agree is that the primary deficit number should have a sensible figure for the maintenance of infrastructure. That is step one and is possibly the biggest step that needs to be taken.

Sir Dieter Helm: That is the reconciliation that I understand Olivier is proposing. He says that we should take these things into account in working out the sustainable debt position going forward. In essence, that is all that is being done. All I am saying is that we are not taking account of a lot of capital maintenance in our current spending; we are pretending it is investment. There is no return on investment subsequently, so it should be in the current spending. That is the difference. I think Olivier agrees that we should take the numbers into account.

Q168 **Lord Lamont of Lerwick:** My question may have been answered. I was just going to say that I can see the advantage of a balance-sheet approach. You can say, "We may have to do this over this period". I understand all that. However, with all these advantages, we still have questions of affordability and repayment in the end. We would still have a question about the sustainability of the cost, even if it was based on a different way of looking at it.

Sir Dieter Helm: I agree.

Lord Lamont of Lerwick: So where have we got?

Sir Dieter Helm: The really interesting question that comes from that is to look at the state of the railways. They are not being properly maintained and the argument is that we cannot afford to maintain them properly. We should then accept that we are allowing the asset side of the balance sheet to reduce. I am on a mainline railway to London and, for 100 days last year, the railway did not work at all. There were no trains for 100 days. That has enormous impacts on productivity, performance and all sorts of other stuff.

The reason it is in that state is because nobody is repairing the bridges. They are not doing it, because the Government have decided that they are not prepared to spend the amount of money necessary to maintain the assets. You cannot hide from the consequences that you have accepted: your assets are going to decline. I see this every day on the railways.

Q169 **Lord Londesborough:** I will stick with measuring debt sustainability but steer you away from balance-sheet issues, for a moment. Given that the global financial crisis was triggered by soaring levels of private sector rather than government debt, should we also be looking more closely at household and private sector debt as a percentage of GDP, alongside government debt, when making judgments about its sustainability?

Charles Goodhart: The answer to that is, of course, yes; we should do. I do not think the position on household debt is that bad. On corporate debt, there is a strong argument to have more equity in banking. The leverage ratio is too high, but that is a separate argument about banking regulation. Corporate debt is a burden, but I do not think it is as immediate a problem as government or public sector debt.

Sir Dieter Helm: It may be, if some of that private debt ends up being a liability for government. Coming back to my interest in utilities, if Thames is put into special administration, the Government, by default, will have to ensure that the service is delivered. That is 80% gearing. The idea of privatisation was to create a private sector balance sheet, have privatisation, then borrow against that private sector balance sheet rather than the public sector borrowing requirement. Real physical assets are invested and the private entity borrows and gears up. It is paid when it is delivered; future customers pay back the debt.

What happened in the infrastructure utility area was an enormous effort in financial engineering to arbitrage between the cost of equity and the cost of debt. Thames has not invested its 80% gearing in real, physical assets; it has invested it in paying out dividends, bonuses and those kinds of component parts. Heathrow is over 90% geared, Thames Water is 80% geared and, more generally, the electricity networks are all highly geared. They are therefore not in a position to invest. That is the issue with Thames and its equity injections and, therefore, the infrastructure has declined. The Government cannot allow that to happen beyond a certain level, although they have tested it to the limits in rail. The consequence of that is a liability that will come back to the Government.

Q170 **Lord Griffiths of Fforestfach:** I want to ask about fiscal rules and I shall quote something you said, Professor Blanchard, which I think is a very French way of teasing us: "Don't ask me for a simple rule. Any simple rule will be too simple … and do not ask me for a complex rule. It will never be complex enough".

The debate on fiscal rules has to take place in the context of what my colleague Lord Turnbull called the vocabulary of public debate because, to the extent that we think a fiscal rule is an anchor, in a democracy it is a way of politicians telling the public that it is performing something that they can immediately understand. After what you said, I wonder where that leaves us.

Olivier Blanchard: I agree with everything you quoted, but I suggest a solution, which is that a debt sustainability analysis is done by an independent institution—a fiscal council—to basically show the likely trajectory of debt, taking into account the uncertainty, and indicates whether or not there is probability that it may be on an exploding path.

I think the final message is fairly straightforward. The analysis is complex, but it reflects the complexity of the issue, not of the technique. The uncertainty is there because it is uncertain. I do not think there is any short cut to this. It is the job of such a fiscal council to be able to say, "We do not think that we are on a sustainable trajectory with a high probability", and to tell the Government this. I understand that people want simple numbers and politicians want simple explanations, but I think this is a hopeless quest.

My point is proven by the 20 years or so of rules that the European Union has tried to develop, starting simple and wrong, and becoming complex and incomprehensible. I do not think there is any alternative to what I suggest. The way the European Union has, at this stage, tentatively agreed on a set of rules is not a good solution. It is a mix of the sustainability analysis and the hard numbers; the hard numbers are getting in the way of good policy. There are issues in which answers are not simple, and are not simple to explain, but I will stand by what I said.

Q171 **Lord Griffiths of Fforestfach:** Can we learn anything from the Swiss, who introduced a dead break which seems to be fairly successful and seems to have the population behind it? It is a very simple figure.

Olivier Blanchard: I will admit that I do not know much about what Switzerland has done. I am violently against an automatic dead break. If, as a result of the DSA, the conclusion is that something drastic needs to be done because things are going down the drain, and we therefore have some limits on deficits or growth for a while, that strikes me as one of the ways one can deal with the implications of a DSA which shows that there is a genuine problem. Anything more mechanical than that, such as the German approach, I am very much against.

Charles Goodhart: I think the development of the OBR and the continuation of the CBO in the USA have been remarkably favourable steps. Not enough notice is taken of their judgments and what they show.

In my view, the death knell of Liz Truss as Prime Minister was when she said that she was not going to take any notice of the OBR, and effectively remove it from participating in the exercise. It will be important, as Olivier was suggesting, that we have expert and independent accounts of whether there is debt sustainability. I agree with Dieter that the scale of the deficit is probably underestimated because of the treatment of maintenance as investment. I agree entirely with Olivier that, at the moment, we are going down the drain.

Q172 **Lord Turnbull:** Charles, I have a problem in that the OBR is not independent enough. For the first five years, it has to take what the Government say they are going to do, and then you see a very clear break in their projections; after about 2027-28, the numbers start to go up because they then become the OBR's numbers. Up until that point, if you have to base your projections on what the Government say they are going to do in the next five years, you are lost before you even get started.

Charles Goodhart: You are absolutely right, and Chris Giles wrote a splendid column in the *Financial Times* pointing out that the OBR's—and the CBO's—figures understate the gravity of the situation.

Lord Turnbull: I thought the CBO was more independent and could put in their own figures. Why does the CBO have to take the administration's figures?

Olivier Blanchard: There are cases in which there is an ambiguity, such as when a law is passed saying that it will expire at some date, and it is passed this way. The CBO cannot say, "We know it is going to be extended". That is just not in the realm of things the CBO can do, so there is always some ambiguity. The CBO is forced to basically use the current legal obligations. Again, you can think of an alternative, but it should probably be a private sector enterprise to question the assumptions.

Q173 **Lord Layard:** Can we come back to taxes? Charles implied that we were going to have to increase the tax take, but of course there are people who would say that is bad for growth. I would love to know what you all think about that debate: the relation between the share of taxes and an economy's growth rate. In particular, are there ways in which we could mitigate the impact of higher taxes through better choice of taxes? In general, what can we learn from international experience of this?

Charles Goodhart: I believe that we can improve the way we tax the population and do so in a way that does less harm to productivity. As I tried to say earlier, taxation on capital is a mistake; taxation on income is not going to be politically popular. That leads me to taxation on land and property, and I would take the advantage of declines in fossil fuel prices, which I hope will come, to maintain the level of fossil fuel prices at the higher level. In other words, do not allow the decline in fossil fuel prices simply to reduce inflation and make people feel better off. It is an opportunity both to improve climate change and to deal with a fiscal problem at the same time. That would be at least two of the measures that I would try to take.

Sir Dieter Helm: Do not worry too much about the decline in fossil fuels feeding through into peoples' bills; that will simply be taken up by the net zero and other expenditures that people have in mind in order to claim that it is not actually increasing costs. The differential between the two will be absorbed.

I have two other comments. One is that when we talk about tax, it is not as clear as people think. A lot of taxation has been privatised on to customers' bills. To put it the other way round, when all those power stations were built after the war, they were paid for out of customers' bills. The French have just increased the tariff on electricity to fund the nuclear programme going forward. As to which is on the tax bill and which is on the consumer's bill, you need to take the proper distribution of public expenditure between these two—your electricity bill includes a lot of essentially public policy components—before you have worked out what the tax burden is.

When people talk about "It is the highest tax rate since whenever", or "the highest burden", I suspect that it is even higher, because we have had 30 to 40 years of shifting things from government accounts on to customer bills.

The second thing is that economists would normally say, "Why don't you tax bad things rather than good things?" If you tax things such as carbon, it raises an enormous sum of money and improves the efficiency of the market, whereas taxing labour does not improve the efficiency of the market. I hope that, within the scope of this, people will look a lot harder at externality taxes, pollution taxes, et cetera—not as well as but instead of some of the other things that we tax at the moment. That would make them much more palatable too.

Olivier Blanchard: We know that there is no simple relation between taxes, debt and growth. It varies, and one has to get very granular to decide which one may have an adverse effect. I mildly disagree with the statement that taxation of capital is bad. What we have done, or what we are doing, on the minimum taxation of multinationals is a good thing—as long as we do it, which looks like it might actually happen. That is desirable.

Q174 **The Chair:** Before we jump to the question of increasing taxes, we all agree that we face fundamental challenges in terms of decarbonisation, demographics, et cetera. Should we not really be asking ourselves, "What should the state be doing and what should it not be doing?", and answering that question? Also, how will we pay for the challenges, be it via customers—as you, Dieter, said—or via taxes? Is that not the fundamental question we need to be asking ourselves before we jump to saying, "Put taxes up"?

Sir Dieter Helm: I could not agree with you more. This is where we have got to: since the Second World War, there has been an incremental addition of government functions, one upon the other. You build up this whole series of interventions. By definition, they become more complicated. That is the way public policy works: you start with a simple bit then you add more and more. There are exceptions, such as Nigel Lawson's Budget in 1986, but these things normally become complicated. If you stand back and ask, "The Government spend all of this but what do they get for it?", that is one question. The second question is: why are they doing some of these things?

We have had some of that debate but it is fairly obvious. Is asking the question, "Should Governments provide from 55 to death?", with cradle-to-grave support in all the various dimensions that I suspect voters will demand, sensible? No. Then you come back to asking, "Where is the balance between the take of tax, be it via customers or through direct revenue, and the functions that we want government to have?" What you cannot do—it is what democracies tend to do—is keep expanding the functions then not provide the money to do them. The electorate are clear: they do not want higher taxes and they want higher expenditure. That has been going on in public policy analysis; everyone knows that. The questions are: what constraints or rules do you put in place, and what are the limits of the functions?

The thing that is really interesting in all this is that the function we have withdrawn from since 1990, while we have had lower interest rates and North Sea oil, is defence. If you look at our defence budget, once you subtract Trident nuclear missiles and pensions, we do not spend very much. If you imagine that returning to the norm—I suspect that, as isolationist America continues, it is probably 4% of GDP—something else will have to go. That is what a crisis does.

The Chair: Thank you. Olivier, Charles, do you have anything to add? Do you agree with that? You do, Charles. Great.

Q175 **Lord Londesborough:** This is the final question. I apologise for taking us on to the rather grim subject of productivity—or the lack of it, particularly in the past 15 years. If sustainable debt requires sustainable growth, how imperative is it to crack this so-called productivity puzzle? I am particularly interested in whether you think enough attention is being paid to what is arguably the structural slowdown of growth, rather than productor potential, as a source of our deteriorating debt dynamics.

Sir Dieter Helm: First, I do not think that productivity is measured very well. I have always gone back to the old Solow point that you can see computers everywhere except in the productivity numbers. If you look at how transformational technology has been then look at the productivity numbers, you wonder what is happening.

Secondly, it is an aggregate. Productivity may be going very well in some parts of the economy and very badly in others. It is about components. For example, productivity in agriculture is awful, but then we have been using cheap labour from EU migration. So why invest in robots? There are different component parts. It is interesting but I worry whether we have the right measure; I would be really interested in the components of it.

Then we want to work out, within those components, which things the UK can build its future economy on and on which bits it cannot. We do not have that debate. We try to do it all—but that is what democracies do because every interest wants their component.

Lord Londesborough: In brief, what is the better way of measuring productivity?

Sir Dieter Helm: That will take longer than the rest of this committee.

Lord Londesborough: Let us sidestep it, then.

Charles Goodhart: I rather agree with Dieter on this. Productivity is not measured very well. The revolution that has occurred in the past 10 years or so has been a revolution in communications. I had never heard of Zoom before around three years ago. Now, Zoom is effectively free for use; it therefore does not enter into GDP or productivity. It is about communications and our ability to communicate with each other over massively long distances. I talk to my child in Boston three times a week; I could not have done that before but, now, I do it at zero cost. That is an enormous change yet it does not appear in GDP or in productivity at all. Many of the basics that affect our lives do not appear in GDP. The communication revolution does not; that is a major issue.

Take the productivity increase that we had between, say, 1945 and 2000. A lot of that was caused by women ceasing to do housework at home, to go shopping every day and to wash the clothes and instead using consumer durables once a week and going out and working. Productivity was massively overstated for decades after World War II because women's work at home did not enter GDP. There is a lovely phrase: I think it was Paul Samuelson who said, "If I marry my cleaner, the GDP goes down". The proportion of married women in the workforce was around 25% in 1945; it is now around 75%. That is a huge change. Do not take these productivity figures too seriously.

Lord Londesborough: Are you both suggesting that we are potentially understating the real levels of GDP?

Sir Dieter Helm: I would not go to GDP in the first place; that is where I would depart because, in effect, we are not properly measuring output in this component part and GDP as a flow measure. I would also adjust the accounts for the capital maintenance, et cetera. You have opened up a whole serious of issues around the broader economic statistics in which we understand the performance of our economy. Lots of people ask serious questions about what exactly we think GDP measures. It goes back to Lord Turnbull's question earlier; this is another concept that perhaps leads us to make decisions that we might otherwise reflect on and do better on.

Olivier Blanchard: I have a couple of remarks. The first is that productivity is badly measured in all countries and mostly in the same bad way, although comparisons across countries are still relevant. My other remark, which is a bit ironic, is that perhaps we should work on improving the productivity measure rather than trying to increase productivity. That might be slightly easier.

Despite what Dieter said, higher productivity, other things being equal, would mean a higher GDP measure in real terms. We may well be too pessimistic about where growth really is. We can deal with some of the issues Charles has raised and we can probably do a better job. I suspect that g is indeed a bit higher than measured g.

Q176 **Lord Blackwell:** I am struck that we started this off as a review into the sustainability of national debt. Listening to all of you this afternoon, what is emerging is that the political problem that we are dealing with, as I think one of you said earlier, is that probably for the last 25 years we have been living beyond our means as a country, and that that is going to get worse. We had 10 years at the beginning of the century when both government and private expenditure was growing faster than GDP and we had a great explosion of debt, which burst in 2008. Since then, we have had almost no growth but we have tried to continue growing public and private expenditure and what the OBR and others are now saying, given the demographics and the need to spend more on defence, et cetera, is that this is just going to get worse. The real challenge is how we confront the population with the need to come back to living within our means. Is that right?

Sir Dieter Helm: We live in an unsustainable economy; therefore it will not be sustained. We are unsustainable in our external trade. We are unsustainable in that our consumption is consuming capital, and we are unsustainable because we are not dealing with the pollution we are causing. In intergenerational terms, we are living beyond our means and we will have to live within our means. Growth will help some of that process, but the scale of those adjustments is what you should focus on in answering your question of whether the debt is sustainable.

A fundamental question is whether the economy is sustainable, because then the debt follows from that, and the economy is not sustainable in its current form. It is not a disaster, it has been unsustainable in the past, but as I say, the external position is very weak. We have to be lent money by foreigners to live beyond our means, from the external point of view. We are consuming our capital; you can see it in the state of the infrastructure around us. We sold off most of the family silver; that is, British industry, which is now foreign owned. And we are not addressing the pollution we are causing, and we do not want to pay a carbon tax or those kinds of things. If you live beyond your means, it is perfectly possible to get back within your means, and there is a growth path going forward and things can improve, but not as we are going on, and that is what I wrote my book about.

Q177 **Lord Lamont of Lerwick:** Charlies, this is quite a trivial point. I entirely accept, or find very persuasive, what you say about measuring productivity and the gains of technology giving us things that are not very easily measured, but when we look at international comparisons on productivity and focus on the UK, looking at statistics that are compiled on the same basis for different countries, while they show that there has been a decline in productivity in quite a lot of countries which had a similar phenomenon of flatlining of productivity, none the less there is a gap in productivity between the UK and other countries. How do you explain that? Is that an illusion too?

Charles Goodhart: No, I do not think so. There is an interesting paper by Isabel Schnabel on productivity in the EU, and one of the points she makes is that it is much easier to develop large-scale manufacturing in technological companies the larger the market that you face. I fear that one of the reasons that the UK has done worse on the productivity scale than many other countries in the last five years has been Brexit, because we reduced the scale of the market for our industry.

Lord Lamont of Lerwick: In the short term and a bit quick for—

Charles Goodhart: No: we are talking short term, about five years, in which our productivity has gone down.

Sir Dieter Helm: I think it is more like 10. But an obvious answer to your question is to say that the structure of our economy is very different from most other economies because we deindustrialised so fast. We have a lot more services, and then the question is: are you measuring productivity correctly in services? The answer may be yes and it is just there is no productivity growth in the hospitality sector, 10% of GDP or whatever, or it may be that we have just not captured it properly, but the structure of our economy is significantly different.

Charles Goodhart: And we were much more reliant on gas, so the adverse terms of trade shock that we had as a result of Ukraine was more serious here.

Sir Dieter Helm: But we should expect that to get a lot better, because the price of gas is falling extremely fast.

Charles Goodhart: With any luck.

Sir Dieter Helm: It has done.

Charles Goodhart: One thing I would say is that, apart from the productivity issue, as Olivier said at one stage, all the advanced economies in North America and in Europe are in much the same boat as we are. In fact, we are not necessarily the worst. I agree that the productivity figures are more disappointing than most, but otherwise the problems we are facing are common to all the rich, advanced economies more or less around the world.

The Chair: Thank you, all, very much. We have gone 15 minutes over time, thanks to your excellent answers and my bad chairmanship. We are very grateful—I am sure I speak on behalf of the whole committee—for what has been a fantastically interesting and insightful session. Thank you, Olivier, for joining us from Paris and looking at a screen for so long. I know how tiring that is.