HOUSE OF LORDS

Economic Affairs Committee

Uncorrected oral evidence: Central bank digital currencies

Tuesday 23 November 2021

3.10 pm

https://committees.parliament.uk/oralevidence/3062/html/

Members present: Lord Forsyth of Drumlean (The Chair); Lord Bridges of Headley; Viscount Chandos; Lord Fox; Lord King of Lothbury; Baroness Kramer; Lord Livingston of Parkhead; Lord Monks; Lord Skidelsky.

Evidence Session No. 10 Heard in Public Questions 91 - 109

Witnesses

Andrew Bailey, Governor, Bank of England; Sir Jon Cunliffe, Deputy Governor for Financial Stability, Bank of England.

USE OF THE TRANSCRIPT

1. This is an uncorrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

2. Any public use of, or reference to, the contents should make clear that neither Members nor witnesses have had the opportunity to correct the record. If in doubt as to the propriety of using the transcript, please contact the Clerk of the Committee.

3. Members and witnesses are asked to send corrections to the Clerk of the Committee within 14 days of receipt.

https://www.parliamentlive.tv/Event/Index/ae9f23e6-caa8-4e03-8dd9-9ce1be44185f

The Chair: Welcome to this session of the Economic Affairs Committee. It is a pleasure to have you here, Governor, and Sir Jon Cunliffe, the deputy governor responsible for financial stability. Perhaps I could begin by asking you the first question, Sir Jon. I read in my *Telegraph* today that you say that cash will disappear and the question will be what role a CBDC can play. What is the answer to that question?

Sir Jon Cunliffe: I should start by saying that the Bank of England will continue to make cash available for as long as there is demand for it, which I also said, but the *Telegraph*—I can see why—decided not to report that.

The Chair: We are familiar with this.

Sir Jon Cunliffe: We are working closely with the Treasury on ensuring that there will be access to cash, but the fact is that the use of cash in transactions is declining pretty sharply. It has been doing so for the last few years, and Covid has accelerated that. Cash is now not usable for all transactions in the economy as a general purpose settlement asset. Some 30% of transactions now happen through internet shopping, and of course you cannot use cash for that purpose.

The question is this. As cash declines and it becomes less useful for the way in which people live their lives in a digital economy, should we replace it with a public asset—state money, a claim on the Bank of England—or should we depend entirely on the private sector to provide the money that is circulating in the economy? That is complicated by the fact that we have to look into the future as well as at the present. Currently, most of the money we use in the economy is provided by commercial banks, but technology and new entrants mean that is not likely to be the picture in the future. A number of new players are thinking of issuing private money in the economy.

In the task force with the Treasury, we are looking at the role that public or state money—the claim on the state—plays in anchoring the unity, interchangeability, interoperability and confidence of money in the UK. We have not come to a conclusive answer to that. The point I was trying to make in the interview was that we need to address the question and think about it seriously rather than let it happen by accident. The result will be a decision that we have not taken yet.

Q92 **The Chair:** Perhaps I should declare an interest as chairman of Secure Trust Bank in asking this question. You also said that on the downside there will be a hit to banks and banks will have to adjust. What will that hit be?

Sir Jon Cunliffe: The honest answer is that we do not know what the demand would be for digital Bank of England money. We are trying to estimate demand for something that does not exist at the moment. We have to be quite humble in how we deal with that. We have modelled a very prudent assumption, which is that 20% of the deposit base in the banking system could move out of the banking system into central bank digital money in some form or other. That roughly represents all the uninsured deposits. Looking at it another way, we tried to look at the behavioural response if people had an extreme preference for safety and the like. It is a pretty prudent assumption that 20% of household and corporate transactional deposits move to CBDC.

We looked to see what the implication would be for credit spreads and for credit availability in that eventuality. We do not know what the demand will be for a central bank digital currency, but the modelling and the sensitivity analysis around it, which we published, suggests that the impact on banks' credit spreads might be 20 basis points. Banks would have to adjust. They would have to fund themselves more with long-term wholesale debt. They would lose a revenue stream from payments, which at the moment is quite a reliable and reasonably substantial revenue stream.

If you go back to 1960—I am just about old enough to remember that—nearly 70% of people in this country did not have bank accounts, and 30% of the money held for transaction was in cash. It is not as if we are talking about a banking model that has been there from time immemorial. Banks have adjusted to changing circumstances before. If they are healthy and competitive, one would expect them to adjust in the future, but it would be an adjustment. Whether or not that 20% figure is the right one, it was the most prudent, sensible and plausible assumption we could make. It could be much less than that.

Q93 **The Chair:** Turning to you, Governor, the March 2020 discussion paper sets out seven ways that a CBDC could support financial and monetary stability. Which have the greatest potential benefit to the UK?

Andrew Bailey: I tend to come at this by looking at what is going on already before we raise the question of whether to introduce a central bank digital currency. We are seeing very rapid growth—not so much in this country yet, but that is probably a matter of time—in what you could broadly call the crypto asset world and what get called stablecoins, although at this point I have to put the word "stable" in inverted commas.

The crypto world is unbacked by assets. If you like, it is computer code. The crypto world is much bigger. The latest estimate for this now is about $2.7 trillion. I give dollars, because much more of it is in the US than in the UK. Just to put that into perspective, that is around the market capitalisation of the FTSE100. Of that, the vast majority—the estimates are around 95%—is unbacked crypto assets, and the other 5% are so-called stablecoins, some of which are probably more stable than others and some of which are not.

That is a very big growth, and it has happened very rapidly. We do not regard it today as a direct financial stability issue, but we regard it as having the potential to be a threat to financial stability, which is why we think we need to take action on that front. That is going somewhat beyond the digital currency world.

I say that, to get to your question, because for me the question then becomes how we tackle that world. From the history of what often gets called fractional-reserve banking, we know it is an inherently unstable system unless it is put within a framework of regulation, which we have done over the years. This world outside that, this crypto/stablecoin world, has all that potential.

Broadly, we face two choices. Is it going to evolve to some world of backed stablecoins that have money-like features, which could be regulated? I must say—I am happy to expand on this, but it is probably for another question—I am sceptical about that. Is the better contribution, particularly to financial stability—this is the direct answer to your question—to say that the better alternative to that may be a central bank currency of digital form?

Q94 **Lord Skidelsky:** I would like to ask a question from the point of view of the user. We always talk about consumer sovereignty, but it seems to me that the consumer here, the customer or the user of money, is being asked to adapt to the demands of technology, the spread of private money and so on without having much of a say in how they make their transactions.

If no one in the end accepts cash any longer, cash will not be used. Patrick Honohan told us that in the UK a CBDC would have very small benefits to customers. To what extent do you agree with that?

Andrew Bailey: I would slightly take issue with the sense of the consumer being pressed into this. My own view—it follows on from what Jon was saying earlier—is that we as the central bank will continue to provide currency and cash as long as the public demand it.

There is currently a bit of a paradox, frankly, in the following way. As Jon was saying, the use of cash in transactions was declining before Covid; Covid has precipitated that because of access issues. Where it will go post Covid is to be seen. However, the stock of central bank cash in circulation has not declined. In fact, it has continued to increase slightly. You might call that a paradox. Lord King is nodding, because we have had this conversation in the past. There are other reasons why that is taking place. I described it as a paradox, but explanations can be offered for why it is the case.

I just want to emphasise that it is not our intention to remove that point of access from the consumer, not least because, from all the evidence that we gather, there is a section of the population that continues to rely on cash and wants to continue to rely on cash. Some of that section of the community is the more vulnerable part of the community, and it is important that we continue to meet that need.

Lord Skidelsky: Do you see any danger in this? At the moment, if I pay for something with cash, no one except the receiver of the cash and me knows about it. Once most transactions become digital, they will be known about by someone other than the parties making them. That can be used. Do you see any real danger in the scope for increased surveillance that results from a diminished use of cash?

Andrew Bailey: I am sure Jon will want to come in on this. Should the decision be taken to go ahead with central bank digital currency, one of the hardest issues in this will be where to draw the line between privacy and the need for transaction monitoring and tracking for financial crime reasons. Of course, that is no different from many private sector commercial money systems today. It is not different at all, actually. In many ways, it is cash that has the different characteristic, as you described it.

I should also say that we recognise—this is why the Treasury is leading on this work in a cross-government way—that this is certainly not a decision that the central bank should take on its own; nor is it something that we would consider ourselves to have the comparative advantage of knowledge in.

The Chair: I know we want to come on to privacy in rather more detail.

Lord Skidelsky: I am sorry. I should have waited.

The Chair: Can we stick on your main point now? We will come on to privacy later.

Lord Skidelsky: I am still not sure why a new central bank digital currency will improve service for the customer. I now pay by credit card when I pay for my taxi. I use cards for all kinds of purposes. Why would this currency improve what I can already do?

Sir Jon Cunliffe: Maybe I can say a few words. This question about the use case from the user's point of view is one of the key issues that the task force and the private sector engagement group are looking at.

I would make a number of points in response. One is just a basic point. If a central bank digital currency plays an important role in anchoring the confidence, interchangeability and substitutability of money, that is a benefit for the consumer. The consumer does not realise what would happen if moneys were not substitutable and you did not have confidence in them, but there is a basic point there about the user's trust and ability to use different forms of money without ever thinking, "Am I using this bank, that bank or cash?"

As to Patrick's point, I read his evidence. To be honest, I am not sure I agree, for two reasons. First, a very important thing is that there are consumers that are also merchants. It is the merchants who see the cost of you using your credit card. If you are a large company, the cost is probably around 30 to 40 basis points. If you are a small business, the cost can be 200 or more. There is a whole range of fees there. When we think about the user, we should think about the merchants and convenience. At the moment, although it is becoming more difficult for them to refuse digital, merchants have the ability to say, "I won't take digital. I'll take cash instead". As that becomes more difficult and fewer people want to use cash, the question is whether they should have an alternative that anchors the cost floor.

Secondly, I would make a forward-looking point. If I can give a slightly odd example, when the iPhone was introduced, nobody had any idea of the range of uses that it would have. I certainly did not. I resisted one for a large number of years. If you look at the experience we have just been through over the last year with the vaccination QR codes, living without a smartphone is now a difficult thing to do. It is quite difficult to predict how innovators will take money and use it, but we are starting to see programmable money being used, certainly in the crypto world. I expect we will see a similar revolution in the functionality of money driven by technology and the private sector. There are examples of that already.

If that happens, it is not really comparing CBDC against the current world of banks and credit cards; it is comparing CBDC against new forms of money potentially issued by different players. The banks will issue in their own right. Given the time that public policy takes, we might want to be in a position, in that world, to provide a public digital asset that the private sector can use to innovate, rather than leave it to the private sector, because, as you know, there are network externalities to money and strong possibilities of closed systems. Providing something that the private sector can use to innovate and to provide new functionality is part of the answer to Patrick's question.

If you look at the status quo, you can say, "Well, I can do everything now". If you are a merchant, you might not be so happy, but the consumer does not see the cost. If you look to the future, in the same way that you could not really anticipate how you would use a smartphone, it is quite difficult to anticipate the changes that we might see in the way money is used.

Q95 **Lord Bridges of Headley:** I just want to pick up Sir Jon on his comments in the *Telegraph*, to which the Chair referred. I am sure you will have read the speech Governor Waller gave about CBDC as a solution in search of a problem, and the speech Fabio Panetta gave in Madrid earlier this month, in which he said, "With digitalisation at full speed, central banks must prepare for a digital future in which demand for cash as a medium of exchange may weaken, requiring the convertibility of private money into cash to be complemented by convertibility into central bank digital money. This is the primary reason why the ECB would issue a digital euro".

Is that the primary reason, therefore, why the Bank would issue a digital pound? I just want to pinpoint the primary, core reason.

Sir Jon Cunliffe: There are a number of public policy reasons why one might. It is important to emphasise that we have not taken a decision. This will all come out. The reasons for going ahead or not going ahead will be subject to public consultation, with a paper coming out next year. From a central bank perspective, if you ask me what the driving reason is, it is the point that Andrew made: cash plays a role in tying the system together. The fact that you can move commercial bank money into cash on demand means not only that it is substitutable but that it is interoperable and all the standards work together.

The question—this is what Fabio Panetta was saying—is whether, if that disappears, we can ensure that in a world where money is changing very quickly the public have confidence and money that they can use, regardless of whether it is public or private. It is that anchoring role that is hugely important.

Lord Bridges of Headley: That is extremely helpful. We have been told that various benefits may arise from a CBDC—for example, financial inclusion, cross-border transactions and, of course, competition in payments. You are saying, for the absolute avoidance of doubt, that the primary motive is—

Sir Jon Cunliffe: I am saying that, from a central bank perspective, that is the primary reason. If I were sitting in a competition authority, I would worry an enormous amount about a big tech or social platform issuing its money and locking people in. If I were worried about digital exclusion, I might worry about some of the forms of money that might be adopted, and ditto for innovation. You asked me what my primary concern is as a central banker. It is about the confidence, interoperability and unity of money in the UK.

This is not the only way of doing it. One could do it through regulation. One could regulate all these things. We are not saying that this is the only way. The history of trying to regulate businesses with network externalities in fast-changing technological environments is not unmixed. The question is whether a public sector option, and convertibility into that public sector option, could play a supporting role in addition to regulation. Otherwise, as Andrew says, we are faced with potentially regulating big techs or new players, not banks. It is a rather different world.

Q96 **Lord Monks:** This is a question about commercial bank disintermediation and how far you have got to date in deciding what level of disintermediation the Bank would be prepared to accept, if you decide to go ahead. If the scale is large, we have heard that there will be implications for the availability of credit, the stability of the banking system and perhaps for monetary policy. If there is too little intermediation, the whole thing is a bit of a damp squib and nothing really happens. How attractive should a CBDC be to hold and to use? Where are the lines to be drawn?

Andrew Bailey: I will start on that, although I am sure Jon will want to come in. I just want to follow on from what Jon was just saying. This is a very important question. When I approach it, I do not see it as a binary decision between central bank digital money and commercial bank deposits. Jon was giving the example of the way innovation is going. Let us face it: there has been a proposal around for several years from Facebook to have its own money. It comes back to the stablecoin point that I was making.

I would see it in that way. What are we going to see in terms of disintermediation of the money system, out of the banking system and into things such as a private money within the Facebook system? Let us use that as a very good example. Where does central bank digital currency fit into that? As Jon was saying, the question we then face—I said it earlier—is whether we try to regulate that or, if access to digital currency and digital payment mechanisms is what we want, whether it would be more straightforward to have central bank money fulfilling that function than to have the new development of private money.

I do not see it as a binary between how much off the banking system and how much on the central bank. There is a lot of innovation going on in the world at the moment, which frankly may start to break up some elements of the banking system if it really takes hold. What do we think about the stability of that and what should our response be? That is the framework in which I see the answer to that question.

Sir Jon Cunliffe: I would distinguish between steady state and transition. That is very important. You are entirely right, Lord Monks. On the one hand, people tell us that introducing a new central bank digital currency will disintermediate the banking system, because the use will be enormous. On the other hand, they say that consumers have no need for it, so no one will use it. The honest answer is that we cannot know the behavioural response to a central bank digital currency until it happens. You can ask consumers, but if you ask them whether they need something that does not exist at the moment, it is unlikely to be a hugely reliable answer.

Some of this will come down to the design. The concept we are exploring is a retail payment use for this money. Some of how much it is used depends on where we put the boundary between retail and wholesale, how much we allow this to be used in wholesale transactions and how much it is restricted. Should this be usable for payroll or pensions, or is it just usable for internet transactions and the like?

Some of those decisions about where the best-use case might be will determine take-up. There are other issues that the task force will look at. Should it be remunerated or not remunerated? You referenced Fabio Panetta's speech. There is an earlier work by Panetta and Bindseil that suggests different remuneration levels. Should this be like cash, actual cash, and carry no remuneration at all? All those things will affect take-up. We will need to test the modelling that I gave you earlier against a design, which will give us some idea of how attractive it will be and how much it will be used.

The transition point is really important. Given that we do not know the demand or how consumers will react, one would want to introduce anything like this quite carefully. As you discovered what the response was, you would be able to change the features, if you needed to. This would also give the banking system time to adjust to what this meant for it in outflow. As Andrew says, if we do not, the banking system will have that challenge anyway unless we ban some of the new technologies and new players in the system, as China has done, which is not very practical.

Lord Monks: I can accept that you do not want to define these choices as binary, but from what has just been said you can see that a whole range of choices will have to be made, and, with digital technology around, at great speed. For example, if there is an economic downturn and some of the banks are in a bit of trouble, like the energy companies at the moment, there would be a great attraction to getting into the central bank digital currency. You could suddenly find a run on the banks and it would be very fast, faster than we have ever been used to.

Andrew Bailey: That is a very important point. In essence, what lies under that point is that we would be making the public's access to central bank money much easier than it is today. There are two forms of central bank money at the moment: currency and reserve accounts at the Bank of England. The public cannot have accounts at the Bank of England, so the only form of access the public has to central bank money is bank notes. That has a limiting effect on the public's access, and it does in a run.

One of the ironies of the Northern Rock run is that the public did not run into central bank money; they queued up to get cheques, which of course is just transferring one form of commercial bank money into another with a three-day clearing delay. That was always one of the slight ironies of that situation. This would change that fundamentally.

My own view—this is what we have been doing since the financial crisis—is that, in a way, the big answer to that question is not digital currency; it is to have appropriate regulation and, even more so, appropriate resolution of banks, so that you can deal with those problems promptly rather than have them take hold. It is an important point. In saying that, I in no sense want to diminish the importance of the point you make.

Sir Jon Cunliffe: If I can add to that, we have a problem at the moment. We had a recent experience of a bank that was rumoured to be in trouble on Twitter, and it took less than 20 minutes for an internet run of uninsured deposits, wholesale deposits, to start. To some extent, we are talking about how much more powerful the dynamics become, not whether the dynamics are new. If it happens on Friday night, there is no longer a safe resolution weekend, because—we saw this in Northern Rock—people have access to their bank accounts over the internet.

We are dealing already with a system in which money can move out of one bank to another bank quite quickly. If we were dealing with an individual bank, it is not clear to me that people would necessarily run from an individual bank to central bank money and stay there, rather than run to another bank.

My recollection is that, in 2009, it felt like we were dealing with the banking system as a whole, rather than an individual bank. If you are dealing with the banking system as a whole, either you lock the money in the banking system through resolution, which we can now do—you shut the bank down and freeze it; then on the Monday morning you reopen it, having used the resolution tools to bail in the bondholders—or you have to publicly support the bank. A CBDC may change the dynamics of that, but it does not change the underlying issue that if you really have a problem of confidence in the banking system as a whole, somebody will have to pay to repair the banks. The public authorities need to move i n quite quickly. The decisions would be faster if people could move into CBDC, but they are not different decisions.

I would make one last point about cash. As somebody who walked past the Golders Green branch of Northern Rock at the time, the pictures on the television of people queuing at ATMs—they were certainly queuing outside the Golders Green one—accelerate a bank run as much as a run into CBDC. To my mind, these are problems that we have to deal with at the moment. They may come at us more quickly and with a bit more force, but it is not a novel issue.

Lord Fox: Coming back to the disintermediation issue raised by Lord Monks, at the beginning you explained a scenario of assumptions that you were modelling around. What was the assumption for the customer relationship? For example, are you modelling that the Bank will have a direct relationship with the previous customers of the commercial banks? Will it assume the relationship through the commercial banks? For know your customer, will the

Bank of England manage that process? How does this changing role of the commercial banks fit into that?

Sir Jon Cunliffe: The modelling was just taking an assumption that 20% of transactional accounts move—basically, all uninsured deposits move—and illustrating what the impact would be on credit availability and on the banking system. It did not go to the model itself.

The central assumption that we are working with is a so-called platform model, which would be partnership between the Bank of England and the private sector. In the same way that we do not issue cash directly to the public—we issue it to the banks, which then issue it to the public—the interface with the customer would be private sector. It might be a bank; it might be a wallet that is not a bank. We would not give customers direct accounts at the Bank of England.

Andrew Bailey: That is very important.

Sir Jon Cunliffe: It is. There are some proposals in other jurisdictions to give customers direct accounts. It comes back to what Andrew was saying. The intention here is not to disintermediate the banking system by putting the Bank of England where the banking system is at the moment. The aim would be for us to provide the settlement asset but for the private sector to deal with the distribution, the storage of the settlement asset and the technological innovation around the settlement asset. Some of the players here say, "We wouldn't introduce a stablecoin if we could use a Bank of England digital currency instead. Our interest is not in the coin but in integrating a digital settlement asset into our social platform and the like".

As I say, I cannot say where this will come out, but in everything we have said publicly and in the discussion papers we have envisaged this public-private partnership without the Bank of England giving accounts to people.

Q97 **Lord Livingston of Parkhead:** When you were here talking about QE, we talked quite a bit about the extension of the Bank of England's responsibilities and powers as a result of QE. Taking that now on to a CBDC, what do you envisage? Will it give the Bank more powers and indeed more responsibility? How is the Bank thinking about that?

Andrew Bailey: Jon has framed the answer by what he just said. We do not see this as the Bank of England moving into the retail bank account business through central bank digital currency. It would be providing the means of settlement and therefore the central bank money to a platform, on which I would imagine banks—or, as Jon was saying, wallet holders, although they would have to be regulated; that is essential, but whether they are banks is to be decided—would be the participants.

If you put that into powers, the Bank would have to have regulatory powers over the firms that were on the platform, because that is the direct interface. If you convert that into legislative powers, it would not involve changing the legislation on banknotes, because these are not banknotes. It is far more in the reserve account arena, which we have today. There would be issues for the whole system. Those would be to do with the legal framework of payments, by which I mean end to end. As we touched on earlier, coming back to what the Chair said, there are issues with privacy and personal data. The question would be whether the current legislative framework does it, once we understand the design. All those things are not powers for the Bank of England. Those would be powers to enable this thing to work.

Lord Livingston of Parkhead: Just taking that on, I was thinking of the particular area that you speak of, unconventional monetary policy, which is becoming conventional now.

Andrew Bailey: I would not go there.

The Chair: We are coming there.

Lord Livingston of Parkhead: Does a CBDC give the Bank significantly more opportunities to transmit unconventional monetary policy? I am thinking about areas such as, potentially, helicopter money—the Bank for International Settlements talked about time-limited money, forcing you to spend it on certain things—and changing the interest rate, if the CBDC was remunerated or not. It seems to give substantially more opportunities to intervene. Therefore, with all power comes responsibility.

Andrew Bailey: Let me give my own view on this. It is helpful to come back to the title of Christopher Waller's speech, as Lord Bridges said: what problem are we trying to solve here? In the set of what problem we are trying to solve here, I do not include monetary policy. I do not see this as a means to, for instance, implement negative interest rates. It is currency. For me, it is not in that sphere. It confuses and complicates matters if we take it down that road. Negative interest rates and helicopter money are not, for me, the reason that lies behind any of this, frankly.

Lord Livingston of Parkhead: That is a very clear answer. Should the Bank be setting this out? You could set this out and say, "That's not what we're going to do. If we did, it would be a Treasury decision, because helicopter money has a whole fiscal element to it as well".

Andrew Bailey: As Jon described earlier, we are doing a large amount of work on this in the task force with the Treasury, which Jon is heavily involved in. There will be a consultation next year. All these things will be laid out very clearly at the end of that. It is appropriate to have the consultation, by the way. I am not assuming the answer; I am giving you my own view. I am going to take a lot of pursuing to come off that view, frankly, but you never know. That is very clearly my view. We will reach answers to those questions. If you do not mind me saying so, people sometimes say, "Why are you taking so long to do this?" As this discussion shows, these are pretty profound issues and they need to be sorted out properly. That is where I start from. This is not about monetary policy.

The Chair: But it could be.

Andrew Bailey: Going back to the Christopher Waller question, there are people who use that as a framework to bring it in. That is not my view of the world.

The Chair: Governor, I am sure you will be there for a long time, but governors come and go, and different governors—

Andrew Bailey: I am very much hoping they do. He is looking so well, so I am hoping for the best for the future.

The Chairman: The question is whether it could be used for this purpose. You are saying that it would not be your intention to do so, but others might.

Lord Livingston of Parkhead: If you go back to Jon's comment earlier about the iPhone, nobody thought it would be used for QR codes. Does it create a framework that allows future usage?

Andrew Bailey: Yes, it does. Of course, once you put it on to a computer system as opposed to bits of paper, you can do things that you cannot do on bits of paper, yes.

Sir Jon Cunliffe: The problem we are trying to solve is the problem of retail payments and the public's use of and confidence in money. The consultation will be on that. I am pretty sure we will get people arguing on both sides. I have had representations saying that this is a huge possibility for monetary policy et cetera and asking why we are not doing that. Those questions will not go away if we do not do a central bank digital currency, if I can put it that way. The question of negative interest rates is out there. The questions about monetary policy are out there.

People will innovate in certain policy situations, as central banks have done a lot since the financial crisis. Not solving one problem because you might be creating a technology that might at some future point be used for a purpose you did not intend would be a strange way to approach the costs and benefits of this. If society said, "No, we don't want that to happen", we could legislate to make sure that it did not happen. Even Parliament can change its mind.

Lord Livingston of Parkhead: You have been very clear about what it is and what it is not. It is quite interesting. A number of witnesses, particularly when we look at other countries, have come to quite different conclusions about what they would use a CBDC for. Some people have said, "It's a wholesale mechanism. The consumer element of it can be handled"—we will go on to that later.

Andrew Bailey: If you are happy, I will save it. We do not need CBDC for wholesale, because we have real-time gross settlement in central bank money.

The Chair: This is a point that Baroness Kramer wanted to ask about.

Q98 **Baroness Kramer:** Yes, you walked straight into my question. The whole discussion so far has been focused on the Bank's plans to look at a retail CBDC, but we have had quite a few witnesses who have talked about the potential benefits of wholesale. I would like to hear from you why your thoughts are that you are not looking at wholesale and why you do not see potential efficiencies that could be introduced, for example, in the settlement process through wholesale CBDC rather than just improving or innovating around the existing systems.

Andrew Bailey: There are two forms of central bank money, as I said earlier. One is bank notes; the other is reserve accounts at the Bank of England. The reserve accounts, of course, are held in electronic form. For 25 years we have had real-time gross settlement for wholesale payments in this country. That real-time gross settlement occurs between commercial banks' reserve accounts at the Bank of England. That is real-time settlement in central bank money.

We are in the process of renewing that system, because it is 25 years old. It is venerable, but it has come to the end of its life. That needs to be done for two reasons. One reason is that it is 25 years old. The other is so that it can be more open to some of the innovations that are going on. What that does, and will do even more in the future, is enable real-time settlement in central bank money for wholesale transactions. We do not need anything more than that, frankly. At least I need to be persuaded that we need anything more.

Sir Jon Cunliffe: We have not decided to introduce it for retail, but we also have not decided what technology to use. Everybody assumes that we would use distributed ledger, but that would follow on from a decision to go ahead. We should let the decision be driven not by technology, but by whether there is a problem and what the solution is. For retail it would be a new thing, because the public do not have access to central bank digital money at the moment. For wholesale, it is more the situation you describe. Can we improve upon what we are doing at the moment with electronic technology by using some new forms, which might include distributed ledger technology? Would that be more efficient? That does not raise the same public policy questions that retail does.

It is not quite right to say that we are not looking at that. The Bank published a paper on omnibus accounts, which would enable the banks that currently have access to central bank digital wholesale to use a digital coin between themselves and then the omnibus account would settle with the Bank of England. That would be a way of introducing this technology to that set of players with which we deal at the moment that currently have access to central bank digital money. I am not going to name check different banks, but there are a number of proposals around to do precisely that, which would be a way of introducing the technology on the wholesale side. We are working with them.

It is not retail or wholesale. Retail gets more attention, because the public policy issues are bigger. Wholesale is more about whether we can use this technology to be more efficient.

The RTGS renewal that is being planned will have the ability to dock into a distributed ledger technology. It will not be a distributed ledger itself, but it has been designed so that it could interface with DLT systems, if that became necessary. When people ask me, "Why are you not doing wholesale?", the answer is that we have wholesale. Technological changes may be needed. The private sector is working on this, and we are working with it, but it does not need the same sort of attention as the questions we have been asked here today.

Baroness Kramer: I suppose I ask the question for two reasons. Standard Chartered is an example of a bank that seems fairly convinced that wholesale digital fiat currency offers opportunities for greater efficiency. It is quite open about the fact that this is an unsentimental industry and, if you gave it an efficient and cheaper settlement mechanism, it would move its operations to that location. This creates issues, particularly, around the City of London and its future.

That operates surely on two bases. One is the actuality and the other is the perception. I remember, for example, the conversation that we had once on the issuing of green gilts in London: "We don't have to do that. We can use the existing system to invest money into green items. We do not need a green gilt". Now we have a green gilt, because the perception of engagement, leading-edge innovation and leadership around these issues has a fundamental impact.

Andrew Bailey: I am not quite sure what lies behind the Standard Chartered point, but it is important to distinguish here between wholesale settlement within a single currency, sterling, and cross-currency. Jon is leading the international work on cross-currency. That is a second issue. You may want to say something on that.

Baroness Kramer: Can you do engagement in the international arena unless you have a wholesale digital currency?

Sir Jon Cunliffe: Yes.

Baroness Kramer: That can be separated off.

Sir Jon Cunliffe: It is not a question of being separated off. At the moment, cross-border payments are slow, unreliable and expensive. They are stuck somewhere between the 1960s and the 1950s; I am not sure exactly where. There are different parts to that. One is the correspondent banking system, which is the oldest part and is doing a lot of the wholesale. I think this is what Standard Chartered is thinking. We can improve a lot without a central bank digital currency, but a central bank digital currency used between participants might well improve that. Some of the proposals we are working with, including the idea of omnibus accounts, would allow that to happen. Of course, a number of jurisdictions would have to agree.

We have faster payment systems now in a number of jurisdictions. Lord Skidelsky was alluding to that when he talked about using a credit card and the like. There are a number of proposals to link those up, which would improve the transmission of retail payments particularly, using existing technology. Even if CBDCs are introduced, they are not going to come in worldwide for quite a few years.

We are also exploring internationally the extent to which CBDC and stablecoin, which would use completely different payment rails, could be used to improve retail. The international work is working on all of them. My guess is that the answer will be a mix of upgrading some of the existing technologies, using some of the opportunities of the newer ones that are just coming into place and developing some of the ones that are on the horizon, such as CBDC. There is a lot that we can do on international payments without CBDC.

Baroness Kramer: Governor, on the issue about the position of the City of London and global leadership, to what extent is that potential weaker without wholesale?

Andrew Bailey: I am not quite clear what wholesale system we are talking about. We have a wholesale sterling system.

Baroness Kramer: Are you basically saying that we have a wholesale CBDC by another name?

Andrew Bailey: It is called real-time gross settlement in central bank money. Over quite a long time, there has been a way of linking up the different real-time gross settlement wholesale systems across the major currencies. It is called continuous linked settlement or CLS. The question is how to move on from there, really. Jon is leading this work internationally. I can assure you that we are not behind the game here.

Going back to the Christopher Waller point about what problems we are trying to solve here, as Jon said, cross-border payments is an obvious one, but in a way it is quite unique because it is a cross-currency issue; it is not a single currency issue.

Q99 **Lord King of Lothbury:** Mr Governor, it is very nice to see you in person after all this time.

Andrew Bailey: It is good to be here in person.

Lord King of Lothbury: I wanted to ask some questions about this link between central bank digital currencies on the one hand and the existing payments system on the other. You have been very clear—it has been very helpful—that on the wholesale level you have this entire network of payment systems that the Bank has been improving year by year for a very long time. That will carry on, so a central bank digital currency is not necessary in that area. In other words, we already have the equivalent of that in the current system.

You talked a lot about the retail dimension, and that is a bit different from many of the witnesses so far. It is helpful to clarify that CBDC is not a currency; sterling is a currency. A CBDP, a central bank digital payment system, is really what we are talking about here. My question is this. You said that you do not want to have responsibility for managing 50 million individual accounts.

Andrew Bailey: No.

Lord King of Lothbury: This will be done with the commercial banks in some sort of partnership. What is the real difference between that and the Bank of England in essence standing behind deposit accounts at present?

Andrew Bailey: That is an interesting question, is it not? In a sense, to put it into classical monetary terms, it is the difference between inside and outside money. The question is whether we are now blurring the distinction between outside and inside money, partly given the regulations and the extension of deposit insurance that has gone on —

Lord King of Lothbury: Yes, and the expectation that, in a real crisis, no one will let the banking system go under.

Andrew Bailey: Yes, but of course with that goes the whole panoply of regulation and resolution that we have done. It is not costless. Otherwise, as you have spoken about many times, the whole discipline goes out of it and the moral hazard problem sets in. Central bank money is different there, because clearly it is a risk-free asset.

Lord King of Lothbury: How would the system work? If I am an individual, do I have separate bank accounts with my commercial bank? Do I have one that is my digital account backed by the Bank of England and another that is just an ordinary commercial bank account? Is it up to a certain limit? How would that work?

Sir Jon Cunliffe: I agree with you entirely on currency, but the term is out there now and it is difficult to change it. I would probably refer to it as central bank digital money, because money is a means of payment, rather than central bank digital currency. The horse has bolted. Once an acronym becomes established, it is really difficult to change it.

On what the difference would be, I would make two points. As I said, we could achieve the same effect around unity, confidence and interoperability through regulation. What makes commercial bank money interoperable or safe? We regulate the banks; we have a resolution regime; we have deposit insurance; the banks settle across the Bank of England's books; we have a lender of last resort, of course, if that is necessary; and we have cash, with which you can go from one form of money to another.

I made the argument for cash playing an important role. It does: it plays an important psychological role in anchoring money. You could say, "Well, we can do all that". The Bank of England can stand behind banks, regulate and be a lender of last resort, which means that people can use commercial bank money with absolute confidence. We could do the same for stablecoins, but then we get into the more difficult regulatory challenges that Andrew was talking about with new forms of money and new players. That underlying requirement to produce cash on demand anchors an awful lot of our regulation, as you know, on liquidity.

The difference is that the public holds a central bank asset. They hold the safest form of money. As Andrew said, cash holdings have gone up in the pandemic even though cash transactions have gone down, because people felt that they wanted to go to some form of safety. That is, if I can put it like this, the psychological role of the public having access to cash.

Lord King of Lothbury: That is true of cash. If this retail CBDC were done in partnership with a commercial bank, as the holder I would not have a claim; I would not own an asset issued by the central bank. I would own an account with the commercial bank.

Sir Jon Cunliffe: That is not necessarily how it is determined. You might have a form of money that is a claim on a commercial bank and a form of money that is a custodian account with a commercial bank or with a wallet. The wallets that exist in the world—they exist already—are not banks. It is not a claim on a bank; it is a custody relationship, as if you had put your bank notes into custody, into a safety deposit box, and you take them out. Those custody arrangements for store of value, if I can put it like that, are growing in the economy anyway, which is why we need to regulate wallets.

It is quite possible that you would have a bank account. You might have your savings as a claim on the bank. They might be remunerated. You might transfer some of that into CBDC, which would be like taking cash out of an ATM, but it would be held in a digital wallet, possibly operated by a tech platform and possibly operated by your bank. That would be under a custodian arrangement rather than a claim on the banking system.

Sir Jon Cunliffe: We have something analogous to that already with e-money. If you use an e-money provider on the internet, you do not have a claim on the bank; you have left a balance with a provider. Under the e-money regulations, it is more like a custodian relationship than a bank claim. It does not exist at the moment. That store of value, if I can put it that way, will grow.

Lord King of Lothbury: The sort of digital wallet that both of you have described looks awfully like a sterling stablecoin. Since in your own speeches you have recommended the regulation of such stablecoins, you would have to regulate digital wallets in very much the same way as you would a bank offering a bank account.

Andrew Bailey: Yes.

Lord King of Lothbury: I go back to my question. Let us suppose, hypothetically, that you imposed a system of regulation not dissimilar to where we are, in which banks have to pre-position enough collateral to back their current account deposits that could be used for payments. All bank accounts would then be backed by the central bank. I do not really see the economic difference between that, which is very much the system we have now, and having a central bank digital wallet.

Andrew Bailey: You could imagine a stablecoin that is 100% reserve-backed; it is 100% backed by reserve accounts at the Bank of England. You could well ask, "What's the difference between that and a central bank digital currency?" Again slightly ironically, we have something in this country that is not a million miles away from that in the paper world, which is Scottish and Northern Irish bank notes. They are fully backed. They were not until your time as governor, when the system was changed, but they are now.

It is an interesting question and one that we are very aware of. There is also an interesting question as to whether a stablecoin that is 100% reserve-backed is a commercial proposition. The flipside of that is whether we would be content with anything less than that, about which I have to say I would take a lot of persuading, frankly. There are some coins around today, although not in this country, that claim to be stablecoins and are anything but in terms of the make-up of their assets.

Lord King of Lothbury: There does not seem to be a really big difference between a CBDC and these things.

Andrew Bailey: A CBDC would have an underlying claim on the Bank of England. The stablecoin would have a claim on a set of assets. As we confronted with Scotland and Northern Ireland, it would have to be bankruptcy remote from the rest of the entity. I referred to Facebook earlier on. That would be one of the big issues about, say, a Facebook stablecoin.

Sir Jon Cunliffe: The IMF has set this out in a report. What regulation to apply to stablecoins is something that we are wrestling with at the moment. The discussion paper from March put out four different backing models, one of which was central bank reserves. If we back stablecoin with central bank reserves, effectively we will have introduced a synthetic CBDC, if I can put it that way. I talked about a public-private partnership in which we issue the settlement asset and the private sector deals with the interface with the public. We will have moved the private sector higher up the chain, if you like. We would issue reserves and the private sector would issue the coin, but effectively we would be doing the same thing. That is one of the things that we will look at in the task force.

If we were to fully back the coin with central bank reserves, the question would be whether it makes more sense for us to do the issuing and to run the central infrastructure or for every stablecoin to take the backing and run its own system. Can we enforce interoperability and enforce the standards better if we are at the centre of the system? It would be the same thing.

Lord King of Lothbury: If you run the system as you do now, bank accounts are very close to central bank digital currency. They are backed by the central bank. You could ensure that the regulation makes sure that that is the case. You will have to have regulation of digital wallets or stablecoins, whatever vehicle partners would issue. It sounds to me very similar to the regulation we have at present for banks.

Sir Jon Cunliffe: A couple of years ago, the Financial Policy Committee put out an expectation for stablecoin that users should have the same level of confidence that they have with existing commercial bank money and the like. Whether the regulation would be exactly the same is unclear. For banks, we are also regulating for maturity transformation. The stablecoins would be closer to narrow banks, if I can put it that way.

Andrew Bailey: It is a narrow bank model, yes.

Sir Jon Cunliffe: There is a big question about how you could do deposit insurance and whether you would need to do that as well. In economic terms, a stablecoin backed fully with reserves would be equivalent to a central bank digital currency. A stablecoin backed with high-quality liquid assets and the like would be equivalent to a narrow bank. One is not perfectly protected in the banking system; one is only protected up to £85,000. A central bank digital currency or a stablecoin backed with 100% reserves would be a safer asset.

Lord King of Lothbury: You could change that through regulation of the commercial banks.

Sir Jon Cunliffe: We could. The point I was making earlier was that we could attempt to do all of this by regulation. The one thing that would disappear—it is impossible to prove one way or another how much this matters—is that the public would not have access to something from the state that says, “I promise to pay the bearer”. When you ask people what they think about money, the image they have of money is physical cash. That may be to do with the fact it is physical, but it may also be to do with the fact that they have a claim on the state. They would not have that if all they saw was a private sector stablecoin issuer. The question is whether that plays a role.

Lord King of Lothbury: I promise this is my last question. If you get involved in providing this new dimension of the payments system, are you worried that you would be undercutting competition from the private sector, as a state body? What aspects of the system might raise that question?

Andrew Bailey: It is interesting, because this goes back to the Christopher Waller problem. What problem are we trying to solve here? If I lay out the set of things that get said to us, banks often say—we saw an illustration of this last week, which I will come back to—“You should do this, because it would reduce the cost of the payments infrastructure”. This is particularly a point made about the cost of running cards or the charges that card providers levy. You saw this last week when Amazon said that it was not going to take Visa cards in future.

My reaction to that—again, this is an issue that we have discussed in the past—is that, as we know, there is a competition issue there. It has been around for a long time. You can go back a long way on that issue. Again, we need to do the work on this. My own view is that issuing a central bank digital currency is a sledgehammer to crack that one. On the other hand, the nut has refused to be cracked for a long time. I would have to admit that. The Competition and Markets Authority has looked at this issue quite a few times. It is raised by the banks. We would have to be pretty careful about going there in this way, because it does seem a very big innovation to make. It is not the only issue, by the way, as this conversation has illustrated, but it gets raised.

Sir Jon Cunliffe: The competition argument plays both ways. On the one hand, at the beginning I was asked what the Bank's priorities were. If you think about some of the competition issues that are raised by money being issued by, for example, big tech platforms, they are potentially very great. A number of countries are worried about that. A central bank digital currency that the private sector can use in its innovation addresses that competition aspect.

On the other hand, in the same way that cash is in competition with bank accounts, if we introduce a central bank digital currency, people may prefer it to other forms of money. That will depend on the features we give it, for example whether it is remunerated, which will make it attractive or not. In introducing it, we would have to be alive to competition concerns and to make sure that we were not competing unfairly with the private sector. If we did introduce it, we would introduce it as a public good. "A service of general economic interest" is the EU phrase for that. We would have to be clear that it did not have competition angles.

Q100 **The Chair:** You said that you were stuck with CBDC—I was going to say "because it had gained currency". Lord King's point is that it is not a currency. This is quite important for people's understanding of it. When we started this inquiry, the revelation that we were not talking about a currency but a payment system was, certainly for me, fundamental. If we continue to call it a currency, is that not going to make it even more difficult to explain to the public and others what we are discussing?

Sir Jon Cunliffe: We have tried to talk about digital money. The discussion document that we put out in May was about digital money. We explain in there that what we mean by that is what is called a CBDC. Most people do not spell it out; it has just become one word, CBDC. You are right: if the proposal is to introduce this, we have to explain it. Generally the phrase that is also used is "digital cash", which captures what it is much better than "currency".

The only point that I would make about currency—this goes back to some of the issues we talked about earlier—is that, if the private sector starts to issue its own currency in a walled garden or a closed system, you have the possibility that it is denominated in its own currency rather than denominated in sterling. Having a settlement asset denominated in sterling is what I think of as a currency.

The Chair: It is an important point. I know the governor can be sensitive about terminology.

Q101 **Lord Skidelsky:** I just wanted to explore a point that you made, Sir Jon, about central bank digital currency as a potential store of value. The governor also said that there was an increased demand for cash but not transactions during Covid. I wonder whether the demand for a custodial function is a result of increasing uncertainty. Keynes would have called it an increase in liquidity preference. Is it a possible function of a central bank digital currency to be a store of value? Do you see that as a problem for which this might be a solution?

Sir Jon Cunliffe: I do not see that as the primary problem we are trying to address. This is precautionary cash holding, which is what people do when they are worried about the future. If the public do not have access to cash or to a state asset and they are worried about the future, is that an issue? It is two-sided. On the one hand, every time people are worried about a pandemic, you do not want the whole system to go into CBDC, which is a run, because that is the safest form of asset. On the other hand, there may be a philosophical question about whether citizens have the right to hold some of their money in the safest form, if they feel a need to do that.

Such research that we have on why people use cash and want to hold cash suggests that it is particularly about safety. We are not going to stop issuing cash. To some extent, that is there. It needs to be usable as well. That is part of the issue. It is a personal view, but there is a role in giving the public access to the safest form of money. On the other hand, it comes with a downside. You do not want the whole system to move to that when people are worried.

Lord Skidelsky: You are not aiming to supply the public with a safer form of cash holding than they have at the moment.

Andrew Bailey: Safer in the sense that—

Lord Skidelsky: It is safer in the sense that it will be a store of value.

Andrew Bailey: No, although it touches on a number of the questions that were asked earlier. It touches on Lord King's question about exactly what the difference is when you have 100% deposit protection that has the backing of the state. No, not in the real sense. As you said, we have no difficulty with the fact that, clearly, the public do use banknotes as a store of value. It is one of the natural conclusions that you have to draw from this paradox.

Q102 **Lord Fox:** Coming back to cross-border payments, Sir Jon, you alluded to the need for international agreement. First, is there a danger of a Betamax/VHS type situation where different standards begin to proliferate in different parts of the world? We have seen the G7 policy principles document. Is that sufficient to drive a unified approach? Could you give us a feeling for how you think this process might go?

Sir Jon Cunliffe: The G7 public policy principles were not really about the standards. They were about the broader public policy framework. Different societies will have different frameworks, but the G7 economies share a lot of characteristics, which is why it was worth doing it.

If a jurisdiction decided to issue CBDC—no advanced economy has made that decision yet—the advantage it would have is that our other payment systems developed domestically without much thought to interoperability with common standards. Given that the majority of central banks are now exploring the CBDC question, there is the opportunity to use common standards and common legal approaches that would increase the ability for interoperability. Rather than as a danger, I think of it more as an opportunity.

Lord Fox: We see it as an opportunity, but how does one harvest that opportunity?

Sir Jon Cunliffe: In the work I am leading on cross-border payments on the CPMI, which I now chair, there is a so-called stream of work—it is called a building block—on interoperability in CBDC. It put out a report in May that looked at different types of interoperability—interoperability can come in different strengths and flavours—and what standards and alignment to ease the different models would be necessary. That is the beginning of this work. More work is going on to try to drill down and go further.

Internationally, you can set out the standards and the ways in which one might do this. There are reasons why jurisdictions might not want complete interoperability, if we think about dollarisation and capital flight. Jurisdictions might not want to make it completely frictionless to move out of one currency and into another currency. I am not saying that interoperability at the highest level is the target of everyone, but, if we put in barriers to interoperability, we should do it knowingly for a good policy reason rather than stumble into diverse systems.

Lord Fox: Is there a first-mover advantage? Does the first G7 CBDC provide the standard?

Sir Jon Cunliffe: No, I do not think of it that way. The primary purpose of a CBDC, if one is introduced, is to answer a domestic problem, as we have discussed. If it is done, it has to be done in a way that suits the use case in that particular country. The characteristics are very different in different countries. We have not talked about privacy yet, but societal preferences around privacy are very different even among advanced economies. It has to make sense in its own jurisdiction. The question is then whether you can have something that makes sense in its own jurisdiction that still does not put barriers in the way. I do not see this as being like Betamax or whatever. There will be a standard that everybody will adopt.

Lord Fox: If you do not mind me saying, it sounds rather vague, in a sense. There are discussions going on, but in the end each country, each bank, will make its own decisions. What are the chances of having that interoperability?

Sir Jon Cunliffe: We have a mandate on UK financial stability and UK monetary stability. If we introduce a CBDC, it has to suit that mandate. The features that it would have to have, the use case and the impact that would have on the banking system would have to reflect the economic nature of the UK and societal preferences within the UK.

In a way, all central banks have domestic mandates. They do not have international mandates. The question then is whether within those parameters we can try to ensure that we do not put in barriers to interoperability. That may not be the same as us all using the same standard, but in some cases it may. If I talk about data standards, we might all want to use international data standards. ISO 20022 is the current one for payments. We might want to have certain information, and we have the chance to build that in from the outset.

The decision whether to do it will certainly not be taken by my committee in the BIS and not by the United Nations. In the end, these decisions are taken by domestic central banks, domestic Governments and domestic legislatures.

Q103 **Viscount Chandos:** If I could pick up on privacy, it is hard to open a newspaper, if that is not an old fashioned thing to do, without reading about CBDC. Yesterday, there was a letter in the *FT* from Richard Gendal Brown, who is a member of your CBDC technology forum. He wrote, "If physical cash declines to irrelevance, should we still have the ability to make payments that are not observable or censorable by the state?" That comes to the key issue of the potential difference between physical cash and digital money. Particularly if you are outsourcing the customer relations, including KYC, through the platform system, how comparable is it going to be to physical cash?

Andrew Bailey: You cannot do anything you like today with cash because it is outside the law and it is different if it is electronic. One of the banks has just been fined a lot of money and is subject to a criminal prosecution for that. That is not the case. The means of monitoring and detecting are different. That is true. I stand by what I said earlier. If this thing is introduced, it will have to satisfy anti-money laundering laws, terrorist financing laws and all the other financial crime laws. That is a requirement. Nothing is outside that in terms of the means of payment.

The privacy legislation is in the area of data protection, particularly the GDPR regulation, which we have taken on from European Union regulation. That will apply too. As I mentioned earlier, the Treasury is leading the work on this. If we think about the design and features of digital currency, does that body of legislation satisfy the need? That is the question we have to answer. In doing so, of course, the boundary gets drawn between what has to be known to satisfy the anti-crime requirements and what has to be kept private to satisfy the privacy requirements. As a society, we have to draw that boundary all the time. It is no different here.

Viscount Chandos: If you are going to try to get as close as possible to physical cash, can you envisage a form of KYC that is different from that which would apply to a conventional bank account? If you cannot, it seems to me that Lord King's point is even stronger: what is the difference?

Andrew Bailey: As a matter of principle, the KYC requirement in a physical cash transaction is not different. The question, of course, is how it is enforced and how it is done. It is different, because practically these are very different means of transmission.

Viscount Chandos: If digital money more or less replaces physical money—you have emphasised that you would go on issuing bank notes, but if they fell out of use to all intents and purposes—there is an inevitable reduction in anonymity/privacy and strengthening of supervision.

Andrew Bailey: This is not a question for the Bank of England; this is very appropriately a question for government. What I would say—I will venture to give a view—is that you cannot really have one standard of privacy, in the broadest sense of the word, for one set of transactions, and a different standard for another because we call it a currency or we use a different phrase, in Lord King's suggestion. That is not possible. If the thrust of your question is that, then yes, they would obviously come together. They would have to. I do not see how you could do it differently.

Sir Jon Cunliffe: If I could add to that, there is a political or societal question about the extent of anonymous transactions and bearer instruments. On the one hand, there is liberty and privacy in that sense. On the other hand, there is a lot of work done on the social damage done by cash in money laundering, tax evasion and the like. That is a balance that is difficult for the central bank to set. It is a balance that society has to set as to how much.

There is then a practical issue, which is whether we could issue central bank digital money in bearer form and whether we are thinking of doing that. Say we do that and make it much easier for people. We cannot freeze the position and have as much cash as there is now. Were we to issue central bank digital bearer money and the like, we would have this question in society about how much of that should be available, and what the balance is between the social consequence of anonymous money—Ken Rogoff's book on this is quite illustrative—and privacy.

The second issue is more technological. Although in principle it would be possible, technologically the risk from digital bearer money—a counterfeiting risk, because computer code is so replicable—at the moment looks very large. At some point, people may come up with technology that can do it. If you think about how quickly you could counterfeit in a digital world, my guess is that technologically it is much more difficult to do than some form of account-based digital money, whether it is a custody account or a claim account. There may have to be a bearer-type element to it, because not everybody is online. Some people do not have access to the internet in remote areas or whatever. There may have to be some way of allowing some offline use.

The technological pros and cons should follow the policy choices. The policy choice about how much anonymous money you want to have in society is, as Andrew said, something that Governments and Parliaments will need to debate.

Andrew Bailey: Let me give you a very real example. Over the last two years we have seen a very large increase worldwide in cyberattacks in the form of ransom attacks. It is quite typical for the ransom to be demanded in crypto assets because of their supposed anonymity.

The Chair: That is a neat segue into Lord Bridges' question.

Q104 **Lord Bridges of Headley:** If I may pick up on the point you have just made, Governor, about security risks, I note that in the discussion paper you state that CBDCs could make an attractive target for hackers and fraudsters who wish to steal funds. Given that, could you tell us what design principles would be required to ensure that a CBDC system is secure? Flowing from that, how do you see the trade-offs that will be required between, for example, the customer-friendly nature of the CBDC, security, functionality, vulnerability and so forth? Could you just talk us through that a little bit?

Andrew Bailey: We have not got to that level of detail in the design. We are still talking about principles here. You describe it very well. They would have to achieve a very clear balance. They would have to achieve a very high level of security. Jon just set out the big risk here, which is that instead of counterfeiting bank notes we have criminals who are effectively counterfeiting computer code and creating the currency in that way. By the way, you see some very well-known examples of people in the crypto world committing very big crimes of that sort against each other.

I do not know whether Jon does, but I do not have a ready answer to your very good question today. How do you combine that very high level of security with the appropriate level of user-friendliness? That is a balance that will have to be struck. The technological world is evolving very rapidly at the moment. Should we go ahead down this road, we very much recognise that that balance will have to be struck. I have to tell you that it is a step beyond where we have got to so far.

Sir Jon Cunliffe: To put it in the context of where we are in the process, the next step is to see whether we have a use case, to see whether we have something that answers a problem, and then to go out for consultation. That will have within it some of the trade-offs between security, functionality and ease of use that we have to balance. We will clearly interrogate what technology can do now. It is only once a decision has been taken to proceed, if one is taken, that we produce a so-called technical blueprint and we engage with the private sector to say, "Here is the blueprint. Looking at it in detail, can you build it?" It may be that at that point we have to make more trade-offs between security and robustness.

Q105 **Lord Bridges of Headley:** My next question may also be premature, but when are we going to get an idea of how much all this will cost?

Sir Jon Cunliffe: First, you want to get to the point where there is a use case and a design. Saying how much this will cost before that is not going to be very useful. When we bring out the discussion paper, in it we will have some things about how it needs to be built and the like. Even if there is a decision to proceed and we then go to a technical blueprint, until you get to the point of introduction, one can pull back.

The key thing is that the decision to engage with the private sector and ask, “Can you build this?” is really a watershed in terms of cost and investment. We would need to be pretty sure that we wanted to do this before we got into detailed design, creation, testing and the like. I would say that the discussion paper and the technical blueprint are when you would have some idea.

Lord Bridges of Headley: For my final question, can I quickly come back to Viscount Chandos’s question on privacy? Just to be clear, we heard that a digital ID is needed to make a CBDC work effectively. From what you said, Governor, I was not entirely clear whether you would agree with that. Would George Bridges have to come in and get a separate digital ID to make CBDC work? Would the current KYC and regulatory/supervisory checks make it work effectively?

Andrew Bailey: It is a design question. My view today would be that, for you to access your account or your holding in the wallet on the platform, you would need a digital ID. Going back to the conversation that we were just having, that would have to have security around it. To what extent that digital ID would be unique to that platform or something that was broader in terms of your identity, it is rather like Jon’s point about the iPhone: the technology will probably move us on very rapidly in a short time, so it is a bit of speculation to some degree.

Q106 **The Chair:** You will not be surprised, but we want to ask you one final question about inflation and QE. Before we move on to that, this has been a really useful session, for which we are very grateful. Once you have sorted out all these problems and decided that you want to go ahead with this, who would have the final say? Is it the Bank, the Treasury or Parliament?

Andrew Bailey: It would be a decision that we would take, in the sense of assessing the evidence, with the Treasury. John Glen was here recently.

The Chair: He did not answer the question, actually.

Andrew Bailey: Did he not? I will have to answer the question.

The Chair: I am sure you will.

Andrew Bailey: It would necessarily involve the Government. Because we would be implementing it, it would also necessarily involve us too, by the way.

The Chair: It would not necessarily involve Parliament.

Andrew Bailey: If you do not mind me saying so, that is really between you and the Government. I do not feel that that is a Bank of England question. You can put that question in terms of what legislation might be needed.

The Chair: Would you require legislation in order to implement this?

Andrew Bailey: At the moment, our view is that, to do it robustly as a payments medium, the answer is probably yes.

The Chair: So it is Parliament.

Andrew Bailey: Lawyers have said to me, "You could do it in the following way and it wouldn't require legislation". Our thinking at the moment is that we could, but that is not sufficiently robust. It is to be tested.

The Chair: That is a much better answer.

Sir Jon Cunliffe: There is an issue about whether we could issue one, but there are other things such as what privacy applies to it, extensions of existing legislation and the definitions that would have to change. My guess is that the framework around it would need some legislative change regardless of the authority to issue.

The Chair: With inflation rising more quickly than the Bank previously anticipated, is there still a clear rationale for continuing asset purchases until the end of 2021? The other day you indicated that the decision not to raise interest rates was a very close call. That leaves me wondering why you think that injecting any more liquidity into the economy is a good thing.

Andrew Bailey: I am happy to answer that question. I had a similar question at the Treasury Select Committee last week. It was a very close decision. We undertake quantitative easing in fixed amounts over a defined period. That period, as you indicated, runs out in three weeks' time. In the language of tapering—that is used more for central banks such as the Federal Reserve that undertake open-ended quantitative easing, but I will use it for the moment—we are therefore fully tapered in three weeks. There is nothing more after that.

For me—I will speak personally now—the judgment was whether it was better to end it at the point at which there is only a relatively small amount still to do, which would therefore have a relatively small effect, but in doing so go back on the principle that the Bank of England undertakes fixed amounts of QE, the effect of which, we think, is felt more at the point of announcement than during the course of it, which is more the effect for those who do open-ended QE.

If we had cancelled the last part, we would effectively be saying that, should we doing it in the future—by the way, I am not saying that we will; I am just saying "should we"—we would have left people saying, "Actually, when they announce a fixed amount, it might not be a fixed amount, because they could just change their mind".

My judgment was that for the small amount left it was not sensible to breach the policy and the approach that we have had for the future. That was what lay behind my decision.

Q107 **Lord Bridges of Headley:** On the consistency of communications in the round over the last few months, Governor, how do you feel it has played out? Do you feel that you have been consistent in your communications and getting the balance right between avoiding nasty surprises and maybe giving too much forward guidance?

Andrew Bailey: Let me put this into a bit of context. We have had indications that inflation was rising since late spring. The amount by which it is rising has changed. We have made clear in our minutes and in our statements that we would respond to that. My concern over the summer—it is not just true in this country; it is particularly true in the US as well—was that markets were, frankly, taking no notice of this. Paradoxically, if anything, market rates were coming off during the summer at a point when our thinking was going in the other direction. It was pretty clear that there was some quite big activity in the markets, taking the position that the central banks would not react to this increase in inflation.

We have had and we continue to have a big debate about the extent to which this inflation is transient and the extent to which it has more second-round effects to it. As we went into the autumn, I was concerned—and I made a speech in September, which put more force behind these concerns—that people thought that central banks, including us, were not in the price stability business. That is a phrase that our chief economist Huw Pill used and I have copied from him. Of course, that is exactly the business we are in. I made some quite clear remarks that said, "People need to understand that we are in the price stability business now". We have to judge the causes of the increase in inflation, the likely duration of it and the risks that flow from that of second-round effects. That is what we do.

I gave a very clear message to say, "Anybody who thinks we're not in the price stability business and we won't react is wrong". It did not say—because we would never say this; it was a conditional statement—"By the way, we're going to raise interest rates at the next meeting". That is a judgment for the MPC, meeting by meeting. It was a very clear message. It is consistent with the statement we put out three weeks ago accompanying the November *Monetary Policy Report*, which said, "If the economy evolves in line with the MPC's view and in line with the views described in the forecast we have just published, we believe we will have to raise rates in the coming months".

On the guidance point, we discuss this a lot. I am not a supporter of what I might call the harder, more automatic forms of guidance. They have not had a good history. There is a boundary between what I would call guidance and, in a sense, setting out our view of the world. At some point they merge into one, but I do not think we will be going back to a harder form of guidance, because that has all sorts of perils attached to it. We will keep under review what I would call the boundary of giving the sort of signal that we gave three weeks ago, which essentially said, "Here is our view of the world. Here is our forecast. This is what we think follows from it". We gave a very clear message that, if the world evolves like this and it is a forecast conditioned on market rates, the bank rate will have to go up.

There is an alternative view, which is that we should go meeting by meeting and not give guidance. That is not off the table by any means. That is very well trodden ground for the MPC, and I could imagine us going back to that. We have been through what I might call tumultuous times in the last two years. The difficulty of trying to give views on what we think could happen in a world of very high uncertainty is very challenging. Using guidance in a world of high uncertainty is very challenging, I have to say. It is a very fine boundary between giving guidance and saying, "Let's not do that. Let's just not say and wait". All I can say to you—I hope you will realise that it is a sensible thing to do—is that we keep this under almost constant review. At almost every meeting we discuss that, which is the right thing to do.

Q108 **Lord Livingston of Parkhead:** From my recollection, Governor, when you were here talking about QE and we asked about reversing QE, you indicated that interest rates would have to go up quite significantly before you would start embarking on this. In retrospect, do you feel that maybe some aspect of QE, particularly reversal, is a more flexible or a finer tool? Is it still your view that you would want to see interest rates go up quite significantly?

Andrew Bailey: We announced our approach towards that question. We announced it in August. To put a bit of context on that—

Lord Livingston of Parkhead: I am asking whether your approach has changed.

Andrew Bailey: When I started my term in 2019, the MPC had adopted a policy that said that the bank rate would have to go up to at least 1.5% before there would be any unwinding. The problem until now—of course, it is changing—is that bank rate never got up to 1.5% on the forward curve in the markets. We had a discussion, which I partly prompted because I was a member of the committee, where we said, "Hang on. Don't we need to revisit this?"

I must say I feel very uncomfortable about having a central bank balance sheet that does not unwind. QE is a countercyclical policy, and the logic of a countercyclical policy is that to some degree the central bank balance sheet is countercyclical. Going back to the previous subject, the degree to which the central bank balance sheet will turn out to be countercyclical depends partly on what we do on central bank digital currency, but let us park that one.

We therefore reviewed it. In August, we announced two things. First, when bank rate reaches 50 basis points—it is 10 today—we will cease to reinvest. In other words, as the gilts roll off, they will not be renewed. That is a fairly gradual run-off of the QE stock. The interesting question is what the bottom of that is and where the balance sheet gets to before you hit the steady state. We do not know the answer to that question, because the stock of reserves that we had before the financial crisis was small. The stock of reserves that we have today is very large. What is the equilibrium level of reserves? It is somewhere between those two numbers, because we require the banking system—rightly, because of the experience of the financial crisis—to hold much larger stocks of reserves for liquidity purposes. It is clearly lower than it is today.

The second thing we announced was that when bank rate gets to 1%—the verb is different here; it was not automatic—we said that we would consider introducing active sales of the gilt portfolio. That is where we are today.

Lord Livingston of Parkhead: You still do not feel that it is a finer tool that you can operate more effectively. You are sticking with that.

Andrew Bailey: The "no reinvestment" rule really puts it on to what I call autopilot. We then have a choice to be more discretionary when we get to 1%. It is very clear to me that we cannot have a balance sheet that remains this big permanently—let us put CBDC to one side for a moment; that is another issue—particularly if at any point in the future we need to use the balance sheet again. It needs to come down. We need to have policies that bring it down. The problem with the 1.5% policy, to my mind, was that it did not do that satisfactorily. That is where we are today. We have a plan. We are probably the only central bank that has announced that.

Q109 **Lord Fox:** Given the scale of the energy price increase, the constraints on the supply chain and the tightness in the labour market, what can interest rate rises do anyway?

Andrew Bailey: Let me draw a distinction between those issues. The energy price rise is of course very difficult. You probably know that wholesale gas prices have doubled since the beginning of August. They are 300% or 400% higher than they were pre Covid. The proximate issue there, as far as I can see, is that, I am told, we have very low reserve gas stocks, particularly in Europe. That has driven the price up, particularly the most recent price increases. There may be longer-run issues as well. There are issues of lack of supply of liquified natural gas from Asia because of Chinese demand.

There is a shipping issue; there is an underlying issue that Covid shifted the balance of demand in the economy from services to goods. There were quite a few things in the service sector that we could not do: go out to eat, go to entertainment and what have you. That is slowly shifting back, but it is quite slow. This is happening in other countries. That is increasing the pressure on shipping. That is the reason we have shipping problems, for instance. Those issues ought to unwind.

The labour market—this is why we have highlighted the labour market—is different. The labour market is very tight. This is the thing that concerns me most. I am sure that it will be the focus of our meeting when we have it in three weeks' time. We have a very tight labour market in this country at the moment, as best we can tell. There are a number of reasons for that, one of which is the recovery. We have had an increase in inactivity in the economy, which is people who do not have jobs and are not searching. As I highlighted in a newspaper this weekend, we have had an increase in public sector employment.

We have probably had a decrease in the labour force, in the population, but it is very hard to measure. It is pretty hard to estimate, but we think the population is less than we thought it would have been in an alternative scenario. All those things are contributing to tightening the labour market. I do a lot of visits around the country. I do a lot of virtual visits around the country. I can tell you—I am sure you hear it too—that the problem of hiring is the primary thing that businesses talk about at the moment. That is my biggest concern, frankly.

The Chair: Thank you, Governor and Sir Jon, for what has been a really interesting session.

Andrew Bailey: You are very welcome.

The Chair: I look forward to trying to answer some of the questions that we have discussed in our report.

Andrew Bailey: Please do.

The Chair: That includes what the point of a CBDC is. Thank you very much indeed. You have been with us for two hours. We really appreciate that.