HOUSE OF LORDS

Economic Affairs Committee

Corrected oral evidence: Central bank digital currencies

Tuesday 9 November 2021

4 pm

Watch the video

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

Evidence Session No. 8 Heard in Public Questions 72 - 80

Witnesses

I: Jana Mackintosh, Managing Director for Payments and Innovation, UK Finance; Peter Randall, Principal, The Aurora Project.

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Examination of witnesses

Jana Mackintosh and Peter Randall.

Q72 **The Chair:** Jana Mackintosh, managing director of payments and innovation at UK Finance, and Peter Randall, principal of the Aurora Project, welcome to the committee. Perhaps I could begin by asking the first question. Why do you think central banks seem to be prioritising retail central bank digital currencies over wholesale digital currency?

Jana Mackintosh: Thank you very much, Members, for inviting UK Finance to give evidence to what we believe is a really important development. The previous conversation was great to listen in on, because this question of retail versus wholesale is one that we need to give careful consideration to. Even stepping back from that, we need to make sure that we fully engage in understanding why we are pursuing the development of CBDCs, and pertinent and relevant to that is exploring the different use cases. Your previous guests alluded to that as well. When we engage with our members, industry and the Bank of England, the benefits and the value that both retail and wholesale CBDCs can develop should be considered.

As we explore those use cases, the different design elements, the different functionalities and the different ways in which it interacts with our existing infrastructure will then dictate where it is that we really realise those benefits. The focus may well be at the moment on retail and in particular the Bank of England process as it has embarked on exploring these use cases, but that is probably because it is really hard to identify a really valid use case in the retail sector, especially in the UK market, where we have good payment methods. We have good payment systems that serve the market really well.

With wholesale, you have the Bank of England developing the real-time infrastructure already and you can argue that the developments, the features and the functionalities that it is building into the new version of the wholesale infrastructure can enable wholesale CBDCs and use cases. Both need to be explored, but the retail use cases are probably a little more difficult to work through and make sure that we really understand the value it will deliver.

Peter Randall: I would contend that it is just wrong. If you look at the Bank of England’s statistics on a daily basis, about £730 billion a day goes through the RTGS system. Retail of that is about 1% or 2%. To all of us it makes no sense at all, but it is when big banks pay other big financial institutions, which they do to the tune of roughly £700 billion a day. The £700 billion gorilla is something that we really need to look, and that is the wholesale market.

That is why we have done what we have done in thinking about the whole Project Aurora thing, which is to draw attention to the wholesale arguments. We have considered those to be much more important and the place where the United Kingdom in general, but the City of London in particular, stands to be a real quick loser. The previous speakers identified that technology does not take prisoners. When things have moved to new platforms that offer much cheaper activity levels, where it is cheaper to do one’s business, that business goes and never comes back.

The Chair: What evidence do you have that the City of London risks losing its competitive position in global finance if other financial centres develop a wholesale CBDC first?

Peter Randall: There was a piece this morning reported on Reuters, and picked up by *City A.M*. and the *Financial Times* even, that said that effectively French clearing, which is tiny, at 1% of the stuff that goes through LCH, is going to be returned to France. Euro derivatives, which is much, much bigger, is also, the City believes, on its way back when equivalence to LCH is removed, probably in the middle of next year. I am not saying it will happen in the middle of next year, but equivalence being removed is quite a serious matter.

Once it has gone to France or to the euro system, it does not come back very quickly. We have seen that happen countless times in the City. There are people I know very well who can tell you chapter and verse what happened when the Bund contract left LIFFE. It took two weeks for about 30% of the activity to transfer.

I can tell you what happened when I set up Chi-X and it took less than a year to become the biggest platform trading equities in Europe, taking it away from London Stock Exchange, Deutsche Börse and Euronext because it was cheaper, faster and smarter. That is what happens to technology. People have no feelings for a centre any longer. They just have feelings for the costs of the transactions. Transactions using a CBDC will inevitably be cheaper and, without it, London will suffer.

Q73 **Lord Livingston of Parkhead:** I want to probe a shade more into that, because I understand that technology changes everything, but a Bank of England CBDC—correct me if I am misunderstanding—will deal in sterling. The UK and UK finance’s role in sterling is a fairly small part of what we do. Eurodollar derivatives is about access to potentially someone else’s CBDC, rather than a sterling-based one. I apologise if I am misunderstanding something, but UK finance usually is not around sterling.

Peter Randall: Yes and no. The answer is that it does not really matter what currency you are settling the thing in. It is where it is done. Where is the employment created?

Lord Livingston of Parkhead: It is not typically settled in sterling, is it?

Peter Randall: Euros, no, like dollars and yen. No, it is not, but without it the skill that London has had over many centuries in being able to do business across time zones and in different types of asset is, in my view, irreparably hobbled.

Lord Livingston of Parkhead: A Bank of England CBDC you think would make the difference in that.

Peter Randall: A Bank of England CBDC is almost similar to the sort of technology that was required when we set up GPS systems for mobile maps. It was a Ministry of Defence piece of kit that was originally used to generate mapping, as you know, and it is an absolutely fundamental technology. It is trivial in many respects, but essential, I would contend.

Lord Fox: I just want to untangle this a little. You introduced equivalence, which is not the point of this discussion, as a reason why business is likely to and is already leaving London. CBDC is not going to save that business, because it is not there now. Would you agree with me that, while that is interesting, it is not actually germane to this particular debate?

Peter Randall: No, I would not agree with you, with respect. What is germane to the debate is that, without London having this technology available to it and without the institutions in London having access to this technology, the chances of us being able to say that we clear and settle whatever sterling value we do each day goes away. It goes away quite quickly; that is the point.

Lord Fox: That would mean we need it tomorrow rather than in three years' time.

Peter Randall: I would entirely agree with you.

Jana Mackintosh: I would come back to the definition of "digital money" and what we regard as digital money. When it comes to the ultimate benefits of new digital money, it runs on the existing infrastructure. It is about how those functionalities and the design of the products that run on top of those infrastructures allow us to engage, whether it is wholesale, retail or new innovative payment methods.

The Bank of England, as I have said, has done a fantastic job in leading the conversations on new wholesale infrastructure. The functionalities that can bring, in part, should be able to serve businesses really well. If that comes with additional functionalities or products such as a wholesale CBDC, to complement those existing offerings, that should be considered, because it is really important. The debate about wholesale or retail should not take away the importance of what the evolution of money is. Ultimately, when we talk about something as important as the evolution and changes to our monetary systems, we need to make sure that we can do it in the interest of the public and deliver value to customers.

Q74 **Lord Bridges of Headley:** Jana, when you look around the world at other global financial centres, which ones are stealing a march on us on wholesale CBDCs, in terms of their development from the perspective of the regulatory framework, et cetera?

Jana Mackintosh: Different jurisdictions are doing it for different reasons. Some of them are doing it for wholesale reasons, which we have seen, particularly in Europe. We have seen other jurisdictions, such as the Bahamas, doing it for digital inclusion reasons. Some other jurisdictions, such as Sweden and the Nordics, are thinking about it in terms of replacement of cash. China is doing it for a very different reason: because of the technology and the flow of money it has outside its monetary system, which is absolutely essential.

When it comes to other jurisdictions and looking at what they are doing, we should not be distracted from looking inward to the UK market and understanding our own needs. We need to make sure that we can deliver what will ultimately be the right value to us.

Lord Bridges of Headley: I am sorry to interrupt you. I am very interested in this concept, post Brexit, of the competitiveness of the City. When you look around the world on the wholesale front, is there somewhere that we should be looking at and thinking, "We've got to catch up with them"?

Jana Mackintosh: I am sure Peter would have many additions to that.

Peter Randall: I have a list.

Lord Bridges of Headley: What are your top three?

Peter Randall: The first would be the Eurosystem, for sure, and almost certainly the Banque de France within the Eurosystem. Secondly, I would have to say Singapore for trade. Thirdly, I would not be an accurate witness if I did not say China. The point to consider is that it seems to be possible to argue that central banks are becoming weaponised. In the 21st century central banks, payments systems and the data that that generates are becoming weaponised. I do not wish to see London, the City of London and the United Kingdom fall behind. I believe we are already quite a long way behind, although it is not impossible to catch up, because we have been asking ourselves the wrong questions.

Lord Bridges of Headley: I understand that. To what extent, though, is it required to create a wholesale CBDC to get the competitive edge we are looking for, as opposed to creating a regulatory framework, sandboxes, et cetera, that enable innovation to take place at speed? You will be fully aware of what is happening down the river in the City and over in Wall Street in all the large financial institutions, in terms of use of blockchain, et cetera. I am just interested in your view that the CBDC is the critical component of this competitiveness edge.

Peter Randall: To quote something from one of your members, "Stuff happens in economies". Stuff happens. The thing that is happening at the moment, in terms of an understanding, is that there is public good, public money, and there is private good, private money. Of course, banks produce deposits, which effectively are the money that we all use every day, but it ultimately settles in central bank money and that is a public good.

Without that central bank leadership that comes from Threadneedle Street, I do not believe that any amount of innovation can achieve this. Is Citibank going to use JP Morgan's coin? Is Barclays going to use RBS coin? Is RBS going to use HSBC coin? No, I do not believe it. Would they use a coin that gave them access to their ledger at the Bank of England? Yes, I believe they would.

Q75 **Lord Monks:** This again follows on really, because we are into the area of the effects on commercial banks of what a central bank digital currency would do. I am interested in what you think the real risks are of disintermediating the commercial bank sector by a currency arrangement of this kind. How serious would it be and how much is it a threat to the existing business models that the banks pursue?

Jana Mackintosh: Considering, identifying and acknowledging the risk of disintermediation is not new. We think about it when we innovate within financial services all the time. At the moment, across the financial services sector we are dealing with a vast array of business models that have emerged. I would agree with Sir Jon Cunliffe when he said, through the careful design and the implementation of new forms of digital money, that the ultimate state is probably manageable. It is probably beneficial. It is the transition towards that end state that can hold risk and the Bank of England is very alive to it.

I do not think the Bank of England's intent would be to disintermediate the banks and the financial services sector. It would want to develop and design a CBDC that can enable that not to happen and would not destabilise the financial services sector. There are ways to mitigate that risk. We need to be alive to it, but it is not insurmountable or a real threat to the stability of UK financial services markets.

Lord Monks: A central bank digital currency would cut the cost of transactions and cut the income of the people who handle the transactions, ie the banks. Where do they make up their money in the new world that you are both talking about?

Peter Randall: I disagree with you that it would necessarily cut the incomes of the banks. The banks would adapt, quite properly, to providing value added services, such as identity—saying, "Yes, this is this person and I'm going to charge them a fee".

I will just for a moment dive back into retail, but it is not my contention that retail is significant in this space. I believe, as I hope you understand, it is the wholesale end of the market. If we dive back for a minute into retail, who are the people who really make the money out of the retail payments that we all think of as free? "I could transfer money to somebody for free". No, of course you cannot. Who pays for it? It is the merchants in the corner shops. It is the Visas and the Mastercards that are sponsoring the Olympics and all the rest of it, because they make only a tiny clip per transaction. Could they offer these services at a lower price? They could, but they are public companies and they quite like making profits.

You have this position where the banks are, at the end of the day, lending money against credit cards or providing sight deposits for people to spend. That is a very different issue. I do not think you will not see a net effect on the level of employment in the payments sector of the economy, but I would urge you and contend that it is really important to just look at—I will hazard a guess; Lord King, I am sure, knows exactly—the 4,000, or whatever, accountholders at the Bank of England. It is much easier to deal with 4,000, dealing with £730 billion a day, than it is with over 60 million people in the United Kingdom, all of whom have slightly different needs and requirements.

Let us do the easy fruit first and then we can go on and deal with the really difficult stuff, notwithstanding that the difficult stuff is actually really efficient at the moment in the United Kingdom, much more so than in the majority of other countries around the world. We are asking ourselves the wrong question, I contend.

Jana Mackintosh: To your question about the impact that a CBDC will have on bank deposits and, ultimately, their ability to lend, which is an absolute cornerstone, we need to be very mindful of the impact it will have on that. We are aware of that, as are all the central banks in the conversations that they are having about CBDCs. The Bank for International Settlements in its documentation has also acknowledged that we need to think about not only the capital treatment of these assets on the banks' balance sheets, but how that could impact the Bank of England's balance sheets. It comes back to how we think about designing the CBDC and the functionalities that it will have as to, ultimately, whether these risks will realise.

Lord Bridges of Headley: Charlotte Hogg, from Visa, questioned the necessity of a wholesale CBDC. She argued that the reserve accounts at the Bank of England effectively play the same role that a wholesale CBDC would. Can you just clarify why you think that she is wrong, without being too personal about it?

Peter Randall: Can I use the Mandy Rice-Davies statement?

Lord Bridges of Headley: You say what you like.

Peter Randall: Well, she would, wouldn't she? Visa makes a ton of money out of this. The BIS and G7 report that came out recently, which was I believe referenced by the Chancellor of the Exchequer when he sat in front of you, stated that, if issued by a sovereign central bank, a CBDC "could act as a liquid, safe settlement asset and an anchor for the payments system". That would be a great mission statement for Visa. It would love to do that. No, it should be done by a public authority. It must be done by a public authority.

This is the answer to so many of the questions that get asked about crypto. Ultimately, Her Majesty's Treasury and HMRC will accept payment for taxes in this country only in pound sterling. They will not accept it in other forms of money, quite rightly.

Viscount Chandos: I am a bit confused, because we seem to swing between wholesale and retail without being very clear that Visa makes its money, surely, on retail transactions.

Peter Randall: Yes, exactly.

Viscount Chandos: Lord Bridges was asking, at the wholesale level, what the difference is between a wholesale CBDC and a digital reserve account that currently exists and is being constantly improved. It seems to me that you are going to improve the consumer's position and have them indirectly, or the merchants directly, pay less for transactions only if you have a retail CBDC.

Peter Randall: They are the same thing. It is a central bank-issued digital currency. It is the same pound that I would use and that a bank transacting across, for example, the CREST system for settling securities would use. It is the same piece of code, effectively.

Viscount Chandos: They are only the same thing if we move from a few thousand accounts at the Bank of England to 50 million.

Peter Randall: I do not believe that is the case. I do not want to spend too much time on retail, but, if you wish to, I hope I can give some answers.

The Chair: The committee does want you to answer the question.

Peter Randall: The difficulty with all of this is that, effectively, the level of wholesale activity, as I have said already, is so much bigger and greater than what goes on at a retail level. You do not need to disintermediate the commercial banks. You do not need to disintermediate any of the existing systems. Effectively, you allow participants at the wholesale level to deploy your central bank digital currency within the settlement systems that they are using.

At the moment, when you transfer money to buy a bond, a stock or something like that, if you are a large bank, it all goes through the system. It goes through CREST, it hits LCH, it does what it needs to do, and then you have to send a SWIFT message to the Bank of England and the Bank of England updates its account. If you had a wholesale central bank digital currency, you would be able to deploy that money within that system, so you would remove from the system an entire level of complexity.

By removing that level of complexity, you would save an enormous amount of cost. Because of the cryptographic qualities of these sorts of things and central bank digital currencies in general, you would make the system much more resilient. That is really important, because, if I am right about my contention that central banks are becoming weaponised, an unfriendly power taking out a central bank for a period of time by hacking it could be very serious.

I refer you to the events of 20 October 2014, when due to some upgrades at the Bank of England the RTGS system was out all day, effectively. It was about six and a half hours in the end. They did get it back and that was good. If you took out a really important payments system for a long time, the level of economic dislocation in the country would be enormous. That is not totally obviated by a central bank digital currency, but it is much more difficult to do.

Q76 **Lord Livingston of Parkhead:** Can I, first of all, address this to Jana Mackintosh? The question I was originally going to ask, about the impact on banks' profitability, has been covered. Can I turn to fintech and other financial institutions, because we tend to get a bit fixated on banks? Does CBDC help or hinder them?

Jana Mackintosh: It is a great question.

Lord Livingston of Parkhead: The UK has a great fintech industry, so it is high on our list.

Jana Mackintosh: The level of interest in and support for this topic from the fintech community and the non-bank community is enormous. The fintechs can provide a huge amount of value when it comes to the development of crypto assets of all sorts, including CBDCs. A lot of the conversations at the moment with them think about use cases, for example, around micropayments and replacement of cash. Every day, they come up with new and innovative ways to address inefficiencies within the retail system.

The development of a CBDC will allow us to re-evaluate the foundational aspects of the business models that it is built upon. To date within the UK, if you think about payments and the provision of payments being a solid business case or having a strong commercial aspect to it, we fall behind in allowing innovative actors, shareholders and stakeholders, to commercialise the innovations that they bring to the UK market.

These significant changes to money give us an opportunity to reconsider those and that really is attractive to fintech. It is attractive to shareholders and stakeholders. That incentivises them to find the good use cases and the really good value that they can deliver to customers in the UK and the UK market. It is great for UK competitiveness, because the world looks to the UK when it comes to payments, payments policy, payments innovation and investment in our infrastructure, to learn from what we do. There is a huge amount of interest and it is positive that they see it as an opportunity.

Lord Livingston of Parkhead: Peter Randall, we share a passion for the competitiveness of UK finance. What are the key features of a CBDC that you see as really important to maintain that competitiveness?

Peter Randall: The one real advantage here, which is very technical I am afraid—

Lord Livingston of Parkhead: We have some technical people.

Peter Randall: I appreciate that. In fact, what tends to happen these days at a wholesale level is the pledging of collateral and the movement of collateral around the system. For example, I am aware of one very large global investment bank that every day puts up about $13 billion into different clearing and settlement systems.

Lord Livingston of Parkhead: That is for margin.

Peter Randall: It is for margin, for deposits and, if you will, to oil the wheels in the system. That money is effectively stuck there all day. It comes back at the end of each day, but it is stuck there. You cannot do anything else with it during the day. If one were to have a central bank digital currency that was transmissible digitally between—

Lord Livingston of Parkhead: This is a UK central bank digital currency.

Peter Randall: Yes, absolutely. If you could do that, you would remove, I contend, a lot of the frictional costs and expenses in the system. Critically, you would release back into the system a large amount of capital that at the moment is just being used as oil, which is great. It keeps the system safe, but if you were able to release some of that back into the system for more productive activities, such as lending, that would be very powerful.

Lord Livingston of Parkhead: In your view, a Bank of England central bank digital currency on its own could do that.

Peter Randall: I believe that that would be an essential precursor to it. The one thing that your colleagues, noble Lords, would take on board if questioned in a detailed way is this: what is it that London offers to global finance. People would trot out the usual things: "It has a good legal system. It has a good time zone. It has a long history, et cetera". There are two other really important things, one of which we never even think about.

Within the City of London, they come in most mornings to Fenchurch Street and Liverpool Street. It is a deep pool of knowledge of how ledgers operate. Nobody thinks of that as being particularly sexy or interesting, but that great knowledge of how to make payments around the world in different places and different areas is a skill that London has had and has existed for a very long time. That is a skill that we can leverage and that, I would contend, the fintech community will pick up and run with. Enabled by a central bank digital currency that is issued by and a charge upon the balance sheet of the Bank of England, I believe that from that point onwards we are going to be in a much improved world.

Q77 **Baroness Kramer:** I am going to take the conversation in a slightly different direction and just ask about the major UK banks. To what extent do you think they are in any way under threat as digital currencies come on stream? To what degree are they under threat, essentially, from big tech competition? I say that in the knowledge that, in the past, when they have seen change coming and new ideas, their primary reaction has been to resist or to delay it.

Jana Mackintosh: When it comes to central bank digital currencies, they are incredibly supportive of them.

Baroness Kramer: Is that at both retail and wholesale?

Jana Mackintosh: Yes, and across banks and non-banks, so the entire community that we represent and the ecosystem of members and non-members. When it comes to CBDCs in particular, there is a wider conversation about the impact of competition, big tech, data, which we did not talk about, and the benefits that new technology can provide, such as central bank digital currencies and upgrades in infrastructure that carry greater values through the data together with the payment. That is where some of the real value sits in managing risks and identifying opportunities.

The banks would see innovation as an opportunity. They have shown that they can adjust. They have shown that they can adapt to that competition. When it comes to the competitive threat from big tech or from fintechs to the banking community, the banks will respond. They will have to respond in thinking about how it affects their business models. It is not making them shy away from this topic. It is not making them think they would want this topic not to evolve. The evolution of money will happen and they are supportive of it.

Baroness Kramer: My question was almost in the opposite direction. As they look for ways in which to contain the impact that might come, for example, from a successful stablecoin, which basically could very significantly disintermediate them, is a CBDC an attractive mechanism of resistance?

Jana Mackintosh: I do not know if I would see it necessarily as a resistance. There is a response to a competitive threat, and then there is a response to what represents a real and true risk to the financial services sector and to customers. When it comes to the introduction of new technologies, banks are more regulated, as you know, across the sector. They are more alive to the risks and managing those risks, and to making sure that customers are protected.

They always do and they will think about these aspects but, when it comes to the competitive threat, the use of a CBDC should serve the entire ecosystem. It should not serve a particular player. As such, we have talked a lot about "same risk, same regulation". The use cases around CBDCs should not be designed with a particular organisation in mind to protect from those risks or allow those opportunities. It needs to be wider than that. The banks accept that view of the world and have, whether that threat comes from big tech or other non-bank players.

Baroness Kramer: Peter, what are your thoughts on this? Do you see the big major UK banks concerned now that there is a new competitive force out there and a very powerful one backed by, for example, big tech with products such as stablecoin? Do they look at CBDC in a way as a potential defensive shield for them?

Peter Randall: I have been furiously making notes to try to give you some thoughts on that. Let us deal with stablecoins. There are many different types of stablecoins, as we are all aware, but effectively they are backed by an asset. A UK stablecoin could be backed by sterling, for example.

I can tell you, and I am sure that many of your witnesses could tell you, that trying to raise money in the City or any place else to put up as regulatory capital is almost impossible. Nobody wishes to subscribe to regulatory capital, because there is no real return on it. If you have £10 billion floating about that you wish to issue a stablecoin with, that is fine, but not necessarily is it going to be a moneymaking scheme, so stablecoins are not the right answer.

Stablecoins have some reflection, almost, to fractional banking. In a sense, my HSBC pound is kind of like a stablecoin. It is backed by HSBC. It is not bankruptcy remote, but there is some level of backing. HSBC will not buy, use or otherwise transact with a Barclays stablecoin or a Lloyds Bank stablecoin. It will with a Bank of England stablecoin. With a Bank of England stablecoin you do not need to put the regulatory capital up because it is issued by the Bank of England and it is, therefore, a charge on its balance sheet. It is a very straightforward activity.

It takes banking into a new and potentially very interesting space, which is to say to the banks that they do what they are good at, which is risk management, dealing with customers, KYC, AML and all those good things; the financial fintechs do what they are good at, which is innovation, payments and making things work quickly; and the Bank of England does what it is good at, which is managing the monetary base and being able to affect individual activity.

The other side of it is that, if you have a central bank digital currency, the number of new tools that it allows policymakers to use grows quite significantly, because it would be perfectly possible, for example, to enable helicopter money, but I do not want to digress into that. There is no real problem with the banks accepting a Bank of England stablecoin or a Bank of England CBDC, but I do not think they will accept each other's.

Lord Fox: Coming back to Jana Mackintosh, you said that the major banks had unanimity in favour of "it" and I wondered if they unanimously understood what "it" was. In other words, the reason they can be unanimous is that they each have their own version of "it". Some element of clearing up what "it" is and what they are rallying around would be helpful.

Jana Mackintosh: I absolutely agree. That is hugely important. When we talk about crypto assets and even CBDCs in the conversation today, the design is important, because it delivers a different product, ultimately. We are not talking about apples to apples; we are talking about different assets.

For that exact reason, when we talk about banks trading and becoming involved in creating products or enabling the market, we need to make sure which bit we are talking about. In some places they would support the development of the market and, ultimately, the "it" at the moment is the evolution of money. The "it" is the concept that we are moving into a digital era and we are digitising money more and more. Those products that ultimately sit with the banks and have been the custodians of banks delivering it to customers on the street are evolving. The "it" they will engage on, but the "it" still needs to be defined properly, so that we can manage the risks.

Lord Fox: You would agree it is easy to be unanimous around the concept, but it is actually the detail where unanimity may break up.

Jana Mackintosh: That is why we are so supportive of the Bank of England process. We are very supportive of the process that it has embarked on, together with Treasury, to make sure that we can define together collectively what the "it" is. Once we know what we are talking about, we need to have the detailed conversations about who can do what and what the risks are.

The Chair: This is the exam question for the Bank of England: "What is 'it'?"

Q78 **Baroness Kingsmill:** This is a small follow-up to your responses to Baroness Kramer's question. It is quite intriguing really. What is the Bank of England's responsibility to the direct customer? If it sets up an infrastructure whereby CBDCs can be used via the banking system as it exists at present, what sort of regulatory and compliance framework should the Bank of England be responsible for? Increasingly, it seems to me at least that, through CBDCs, the Bank would be moving in a more customer, by which I mean the man or woman in the street, direction. Have you thought about or considered this, or is it a bit too theoretical for the moment?

Jana Mackintosh: No, it is crucial to the debate in terms of the various roles and responsibilities the various actors will have. I cannot speak for the Bank in terms of how it wants to approach necessarily the man on the street, but one thing that I value in the policy approach the Bank has taken, in particular when it comes to innovation and on big infrastructure change programmes, is that it always has the impact on the customer in mind.

When they embark on big change programmes, such as RTGS renewal, they are very clear as to what objectives and outcomes they pursue. That is a really good check for us to make sure that, when we embark on these changes, we can make sure that they will ultimately deliver value to the man on the street. That being said, the Bank does not have to, in this debate and in the design of a CBDC, have that end customer relationship. At the moment, it does not, and the introduction of a CBDC does not mean that it has to. It has a choice as to what its role should be and how it wants to engage with that customer, so it comes back to how we design that and how the Bank of England designs its role to enable this market.

That is the position that we are all trying to work through and that is why, again, the use cases are really important. It is important to understand the technology that is needed, but in short we have those choices and options. It is early days in how we want to design that product.

Baroness Kingsmill: The regulatory framework is pretty critical, is it not? If the whole objective of these instruments is to speed up and reduce the cost of money transfers, ultimately, the person in the street is the one who is going to experience the benefits or the disbenefits of that. Therefore, I would have thought that the responsibility of the Bank was definitely to at least provide an outline of the regulatory and compliance framework that should be applied.

Jana Mackintosh: We are advancing those conversations in parallel, which is absolutely right, about the regulation needed for stablecoins. Who the appropriate authority would be to manage a stablecoin is a really good question. The Bank will have a role to play, but the FCA has an increasingly important role to play to make sure that those kinds of products coming into the market are regulated appropriately. It will help with the confidence and trust in money, and for the banks in enabling those kinds of products to come to market. That is right and, ultimately, a CBDC is just a different form of a stablecoin. We are already thinking about how to regulate crypto assets in the UK market and those conversations have to progress in parallel.

Peter Randall: The systems and regulations are already in place.

Baroness Kingsmill: You do not think they need to be changed.

Peter Randall: We do not need to make big changes yet. We just need to make what is quite a trivial change in the way in which the Bank of England is able to issue a central bank digital currency that can be used at the wholesale end. Then I can see it moving through into more complicated areas, such as retail, international trade and international access. There is a lot of preparatory work that could be done first, but the existing systems are perfectly good and standard.

Baroness Kingsmill: Yes, I can see that, because what is the difference between a piece of paper with the Queen's face on it, a piece of code and a Trobriand Islander's pebble, if you see what I mean? You can take it back to the origins of means of transfer.

Peter Randall: The Bills of Exchange Act and all these good things that were put down in this House, probably, in the 19th century regulating international trade or how payments are made in real terms have not changed very much. The only thing that we are talking about here is effectively producing a payments system for the 21st century. That is relatively, I would have thought, non-contentious. I hope it is.

The Chair: For those watching the committee who were not sure where ”stuff happens” came from, it is from *The End of Alchemy* by Lord King, which is available from all good booksellers still. A very good read it is too.

Peter Randall: I have my copy here.

Q79 **Lord King of Lothbury:** Splendid. We can all agree that we want as good a payments system as it is possible to have. The question I would like to put to you is this. Would it not be possible to talk about changes to the payments system that could be brought about, for example, by expanding the number of institutions to which the Bank provides accounts? Peter, you have been stressing the importance of final settlement being a public good. Do we need the term "CBDCs" to discuss what you want to see, because there is a great wave of enthusiasm for CBDCs?

This is the "it" question and everyone is very enthusiastic when you use the phrase in a way that they would never be enthusiastic about a technical discussion of minor changes or even major changes to the payments system. Deep down my question is this. Do we need to use the term "CBDCs" in order to bring about the changes that you would like to see in the payments system?

Peter Randall: We probably do, because we need to focus things in a slightly different area. I have heard members question this before and the line of the questioning is effectively this: "What is the question that CBDC is the answer to?" I am sure none of your Lordships would feel that, but lots of people feel that is a very clever question. I would contend that they would be completely wrong, because the real answer here is cost. It is the phenomenal amount of money that the system costs to operate.

There was a report this morning or yesterday issued by Oliver Wyman and JP Morgan, where they said that $23.5 trillion of global trade goes through. That is real trade, people buying and selling stuff, not banks buying and selling speculation. Of that $23.5 trillion, the costs within the system that Oliver Wyman can get to are $120 billion a year, and it takes three to five days for those transactions to take place.

That is where the wooden navy is and we have to ask ourselves about the submarine. The submarine language, I suspect, is to use a catch-all phrase, such as a CBDC, because it focuses people’s minds on the cost, which is the real issue here. That is the frictional cost that delays activity and that prevents more activity from taking place. We all know that investors and participants in the system are highly sensitive to the frictional costs of transactions and removing even some portion of that frictional cost, in my opinion, would improve the system for the benefit of all of us.

Lord King of Lothbury: One can agree with the high-level statement that one would like to reduce the costs, although, if the total amount of money going through the system is $23.5 trillion, you would expect some substantial cost necessary to make that a fool-proof system that was resilient and reliable. As an individual, I can make transactions of substantial amounts that go through in the space of a maximum of two hours to a wide range of people. I wonder whether it is not so much the domestic system that is the problem, but cross-border payments.

Peter Randall: With respect, that is a very big part of it, but I would say it is not just the domestic system. It is the wholesale end of the domestic system. It is when at the end of the day or during the liquidity windows the net positions of Barclays against Lloyds or the net positions of bank A against bank B are settled across the ledger at the relevant central bank.

By allowing those banks to use a settlement asset, which is deployable electronically because it is issued by a central bank, so you could always take it back to the central bank and credit your settlement account at the central bank with the asset, you speed things up dramatically. When you speed things up dramatically in this world, as I know you are much more aware than I am, you reduce risk. Reducing risk to a very large extent means you can reduce the charges associated with that risk and allow the authorities, the regulators and all the rest of it to run things effectively in real time, so they can see where payments are, the stresses within the system and that XYZ is not funding at the right levels to meet its obligations.

Lord King of Lothbury: We have a real-time system now in RTGS. The easiest way that you can wave a wand and reduce cost is to allow everyone to have an overdraft account free of charge with a central bank, because then you do not need to put up the collateral. I cannot make payments from my bank account without having money in the bank account and that is why the system has some frictions in it. I do not see that you would want to get rid of those frictions.

Peter Randall: I certainly do not think that for retail players that would be appropriate, but for wholesale players there are some very strong arguments that it would be deeply advantageous. I would just go back to the point I made earlier. If the City of London loses its pre-eminence in clearing, settlement and all the associated services that are provided—because there is another centre 300 miles away that does it more cheaply by having a central bank digital currency; because Christian Noyer, the father of the euro, now looks like he is going to be the father of the digital euro as well; because of the things that have been coming out of Brussels, the ECB and the Eurosystem in general; and because they are able to get there more quickly, more cheaply and first—there will not be very much loyalty to the City of London as a place. It will be more expensive to transact business, it will take longer and it will be less attractive.

Lord King of Lothbury: This is the bit that is hard to understand, because the Bank of England cannot offer a settlement system in euros and my friend Christian cannot offer a settlement system in sterling. The central banks are, in a sense, in a position where they play with their own teams in their own currencies. They cannot offer settlement systems in each other’s.

I have forgotten who mentioned this; perhaps it was George. The great talent of the City of London and the expertise is not dependent on transactions in sterling. It goes much wider than that. I do not really see why the City of London will stand or fall by changes in the settlement system in sterling.

Peter Randall: I can say my direct experience of running equities clearing and equities activity was to the contrary. The London Stock Exchange, and people such as David Lester and Clara Furse, would tell you that the competition from Chi-X and Turquoise absolutely destroyed its business in cash equities almost overnight.

Lord King of Lothbury: That was not dependent on the file settlement system operated by the Bank of England.

Peter Randall: Part of it was, but most of it, as you know, went through the European Multilateral Clearing Facility—EMCF—which was headquartered in Amsterdam. A larger portion of the transactions took place in non-sterling currencies, but, effectively, this was owned, controlled and run in London and it really took competition to a higher level. The shareholders were based pretty much all over the world, but mainly in London and the United States. It is the same threat: if we just look at what is in our own backyard, we are going to lose out. An essential precursor here is the ability to get a central bank digital currency up there, so that there is a flag we can wave.

We talked earlier about standards. There is an ISO working group. The great thing about standards, as we all know, is that you can choose any one you like. The wonderful thing about this at the moment is that the secretariat, I understand, for large parts of this is provided by the Russians and the Chinese. We do not have anything.

We cannot spend too much time talking about it, but I refer your Lordships to the case of Huawei. Effectively, we have not competed in 5G and we are now well behind the curve.

The Chair: I am very conscious of time. Jana, you had not had a chance to say anything on the points raised by Lord King.

Jana Mackintosh: I will be brief. Lord King, without taking us too far back into the conversation, your opening question is an absolutely important one. We should have a conversation without the buzzwords about what the functionality needs to be and what we want to deliver. You are absolutely right: we should focus on enabling what is needed, irrespective of whether it is a CBDC. The Bank of England has embarked on that journey and the retail market is embarking on the journey of upgrading the infrastructure.

Interoperability, standards, greater functionality, transmission of data, greater consumer protection and greater access to these systems, which the Bank of England has started enabling and which we started enabling in the retail space, are all things that we are delivering. We do not have to wait for a CBDC to help us get there. If a CBDC adds further functionalities that can advance us, get us there faster or make it even better, that is the right thing for us to consider, but it is important that we keep an eye on how a CBDC would function alongside the existing programmes, the existing products and services, and the existing digital money that we have.

Q80 **Viscount Chandos:** In our earlier session, we heard an example of where a consumer or, indeed, a company could see real benefit in international payments, particularly, say, to a recipient in a lower-income country. What is your view on that, in both a wholesale CBDC environment and a retail CBDC? How would it be different?

Jana Mackintosh: We have discussed this at length. The benefits that the new technology can bring to cross-border payments are enormous. There are huge inefficiencies within those transactions, which is well documented and well recognised. When it comes to cross-border transactions, at the moment we see many transactions that originate overseas running over our retail systems. The retail systems are increasingly accommodating new business models, new fintechs and new transactions to run over it from the likes of Wise and other fintechs established in the UK.

We need to consider the purpose, the value and the use case that can be delivered over the infrastructure, irrespective of whether it is wholesale or retail. There may be a need for both, depending on the functionalities, values and risks. That needs to be done, depending on whether we believe it needs to be done in commercial money versus central bank money, on whose balance sheets the assets ultimately sit and where the liability is.

Those are really relevant and important questions, but there is no doubt in my mind that these advancements in technology, including the development of CBDCs, can have a huge impact on cross-border transactions and help the remittance of money be faster, cheaper and better for consumers, get there in a more expedient fashion, and, in doing so, gather more data and transmit more information to help us make the systems more secure. The technology now enables us to do more. The existing infrastructures do not quite enable us to do that.

Peter Randall: I totally agree.

Viscount Chandos: There have to be preconditions in terms of the interoperability of different national CBDCs.

Peter Randall: Systems, in my direct experience, interoperate relatively straightforwardly. In financial markets, there is something called the Financial Information eXchange—FIX. Virtually all asset managers, all broker dealers, most banks, all stock exchanges and all clearing houses use some version of that. They can talk to each other. The interconnectivity and the ability to send a message from A to B, and for A to read the same message that B sent, is there. It is established and there are standards around that. You could say that is just SWIFT. Yes, it is just SWIFT, except SWIFT charges for that and there is a very large expense associated with it.

There are precursor things that are important to think through, but the most important precursor is to have the thing in the first place. Without in any way being wrong about it, there are certain people one should not listen to for advice on being married and they are your children.

Viscount Chandos: I was not going to go into that.

The Chair: On that note, I am going to conclude this session. Thank you very much, Jana Mackintosh and Peter Randall. That has been a very helpful session and very illuminating.