**Central Bank Digital Currencies, at Women in Payments – Online**

**Michele Bullock Session 1**

**Moderator (3:51)**

There's so much public interest on CBDC. Michele, it would be great if you could share with us the central bank’s perspective.

**Michele Bullock (4:00)**

What I might do is start by asking why we're all talking about this all of a sudden. I think there are a few big factors at play here. The first is that – and this isn't new – that there's a recognition that there's gaps in payment systems, and the two big gaps are financial inclusion in some countries, typically not in advanced countries, but in many developing countries and cross border payments where there are lots of frictions, lots of costs, very costly, it's slow. We've known about that for ages and it's just percolating along in the background.

The second factor is that there is a decline in the use of cash, as in banknotes, and that's been accelerated by COVID and a lot of countries are saying, well hang on, the central bank's main method of payment that it issues, the banknote, the claim on the central bank, is declining, shouldn't central banks be offering an alternative claim on the central bank? So there's that in the background. The third factor that's in the background is just the increasing innovation and the whole digital money thing, started with Bitcoin, but advancing. I think something behind this is this really low interest rate environment we've been in since the global financial crisis. People are looking for ways to basically earn yield.

So those three factors I think have generated… and there's been some specific events along the way, but they've generated a lot of interest in this, and I have to say that in the last couple years, the whole tempo among central banks has increased markedly in this. The Bank for International Settlements has been quite actively calling for central banks to be working on this, many central banks around the world are. So let me go back a little bit, and I'd like to expand on some things Nish said about definitions. When we talk about money in the economy, most of our money is actually already digital.

Cash, which is the only non-digital thing, or banknotes, it's only around 4 per cent of the total amount of deposits out there. Most money is already digital. It's just in commercial bank deposits. That's what it is. The other point I would make, and people I don’t think, think of it this way, is that we actually already have a central bank digital currency. It's called Exchange Settlement Accounts at the Reserve Bank, and that's the way that banks digitally move money between one another. ANZ doesn't take a big bag of cash and pay CBA with a big bag of cash, they exchange central bank account money, which is a digital currency.

It's not the way people think about it in the context of what I would call a retail central bank digital currency. That's the concept that you, I, our mums and dads, our kids all have some access to money, which is a direct claim on the central bank. So like cash, like banknotes, except it's not in a physical form, it's in a digital form, and that's what we're talking about when we're talking about central bank digital currencies in what I’d call a retail sense. So at the Bank, we've been actually doing quite a lot of work on central bank digital currency. Our focus initially though has been very much on what we call wholesale central bank digital currency. So that's basically about settlement between financial institutions, its big amounts of money exchanging hands. So like we do with exchange settlement accounts, but perhaps doing it with some sort of central bank digital token or something.

We've done a couple of experiments. One we did, we did try to replicate a simple settlement model. So instead of doing it across central bank accounts, we experimented with issuing a central bank digital currency token, and then the banks themselves could exchange that token amongst themselves, and that was a very simple model. More recently we've been doing some work with a couple of banks, CBA and NAB in particular, and a couple of other participants on a thing called Project Atom, and the concept there is that we have this wholesale digital currency, claim on the central bank, and it's used to settle payments associated with a tokenised syndicated loan. So it's one step further along now, it's saying, can we use the central bank digital currency to effect delivery versus payment in some sense with another tokenised asset.

So that's really where our work has been focused. We have said in the past we don't really see a case for central bank digital currencies for retail use, although we're constantly looking at that issue, but other central banks have, and I'll just highlight a few and we can come back to some of these conversations. The central bank of The Bahamas in fact has one, it's called the Sand Dollar, and the motivation for them was a financial inclusion motivation, people didn't have bank accounts.

China. The Chinese have developed, it's in pilot phase, a central bank digital currency. I think everyone's expecting it will go into production if you like, and their motivation is I think also financial inclusion, but also they're looking at the big techs: WeChat and Alipay and worrying about the control of big techs over the payments system. Sweden and Europe are also looking at this issue. Sweden is very worried about the decline in cash and has a philosophical view that the central bank should be offering some sort of currency to their residents, and in Europe I think it's motivated a lot by the fact that they want a single euro.

So there's a few examples. The work is hotting up, as I said, and I think I'll just stop there and then we can pick up some of these themes later on. So thanks Siew Lee.

**Moderator (10:32)**

Thanks. Actually, I have a follow-up question for you Michele. You mentioned that there's so many different types of reasons why the public is looking to CBDC. For Australia, what amongst the reasons are the biggest motivator for Australia to adopt this?

**Michele Bullock (10:53)**

I’d probably preface it by saying at the moment we don't see a lot of motivations because we have fast payment systems. We already have digital currency, we have a highly banked population, so there's not a financial inclusion issue. We have everything we really need, so the question is what gap would it fill? And for me, there're two potential gaps. One is the cross border issue, which we can come to. The second issue is that in a world of digital, and if you don't have any cash, what happens if the systems go down? What happens if the electricity goes? What happens if you have a cyclone in Northern Queensland and there's no power? How do people pay for things if there's no cash? There might be a role for something like this that can operate in an offline environment, which is a central bank digital currency, so there might be something there. There's a couple of potential use cases, but if you looked across the board, for me at the moment, I'm saying, what gap does it fill for me?

**Michele Bullock (19:08)**

Can I just jump in there? I think your point about programmable money and digital asset is a very important one. Because what you've just explained there, for me, is why it is in the wholesale space that this is of most importance. This concept of being able to have atomistic settlement, of being able to program the way that things will happen, I think is very important in those markets. I'm not as convinced, it's so important in the retail space, in terms of me paying you, or me paying the merchant or something like that.

The other point I just wanted to make and you alluded to it, is the issue of settlement. It's very important that in the high value space, one of the things that we get out of our current digital system, they're not programmable but its digital money, is that when it's settled, it's final and it's done. And so whatever the technology provides in this sense, it's really important that this concept of probabilistic settlement doesn't exist in high value. We can't have a circumstance where there's a really high value settlement, and it's not quite certain for a while. That's a step backwards, so that's why all those things you're talking about are crucial to this particular aspect.

**Moderator (29:48**)

I see Michele nodding there. And I think there's a few things we can talk to that. One is, do we see other countries also looking at that from that angle or how they're going to do it sustainably? The other is, what is also the central bank's views? Would you both like to talk to it?

**Michele Bullock (30:13)**

Let me just say a couple of things. Central banks are clearly focusing on sustainability from a couple of perspectives. There's the financial stability perspective and the impact on the financial system and so on. So that's one perspective. They're also looking at their own operations as other corporations and firms are. One area that has had some recent focus in some countries has been the carbon footprint of the banknote printing business. And it has a reasonable carbon footprint because you're moving lumps of cash around the country, you're transporting around the country and so on. So conceivably, the digital economy offers a lower carbon footprint. So I think there is work to be done there. And I agree with Lisa that it is an opportunity.

One of the big things that people talk about with Bitcoin and some of the crypto assets, I'm not calling them cryptocurrencies, crypto assets, is their big energy footprint. And it's not only that they are energy using coal, sometimes they're not. Sometimes they're using renewables, but they still have a massive energy consumption. So the more they're consuming, the less others can consume it. This whole energy consumption issue, I think, is a very big issue. And to Lisa's point, I'm no expert in this area, but I think this is going to be something that will be in the thinking of central banks as they think about how this might be implemented.

**Michele Bullock (34:33)**

I have to say though, despite all that, I get plenty of emails from companies telling me they can set me up a central bank digital currency in a week.

**Michele Bullock (36:36)**

Can I come at it from two different angles? The first angle is, central bank digital currencies in and of themselves wouldn't typically need to be regulated because they're being issued by a central bank. The central bank has no credit risk, so it's different. The concept of the regulatory framework for the non-central bank digital currencies in particular stablecoins and possibly crypto, which Bragg talked about, it's a very difficult space. Everyone is grappling with it and I won't go into it. But coming back to the central bank digital currencies again… banknotes, of course, are anonymous in the sense that you can exchange them and no one needs to know that you've exchanged them. Would central bank digital currencies offer a similar experience? So could I pay Lisa with complete anonymity? No one can track that I paid Lisa. I’d have to say that I think that's reasonably unlikely… if you are moving into a retail central bank digital currency. Wholesale obviously must be able to do this.

But the concept of a retail central bank digital currency that allowed people to just not be tracked in terms of what they were paying, to be completely anonymous, I think is highly unlikely. I don't think central banks would go down that route. There would be rules around privacy, there might be rules around when you were allowed to actually track where people were sending their money, but basically you wouldn't have a purely anonymous style of central bank currency. In my view, I think that's an extremely unlikely outcome.

**Michele Bullock (40:39)**

Well, my prediction actually is, notwithstanding all I said about the use cases for retail CBDC, my prediction is actually that's exactly where we're heading. I think enough countries will start going down this route and we are going to end up there. That's my whole prediction.

**Moderator (41:00)**

And actually, I'm going to extend that a little bit. I think your colleague, Head of Payments Policy, Mr Tony Richards, spoke a little bit about that prediction.

**Michele Bullock (41:10)**

Yes, he did.

**Moderator (41:12)**

Would you like to expand on that a little bit on what he said?

**Michele Bullock (41:16)**

He gave a speech the other day, which I think set the cat amongst the pigeons. The summary was that he basically felt that if stablecoins and central bank digital currencies for retail use actually got up and running, so-called cryptocurrencies or crypto assets really…will be niche use, they won't become mainstream use. Central bank digital currencies for retail use will basically ensure that they're not used for payments. I don't think they are at the moment anyway, but it will ensure they won't be used for payments.