

Evidence Report  
**APPG BLOCKCHAIN**  
UK Parliament



ALL-PARTY  
Parliamentary  
Group on  
Blockchain

# CENTRAL BANK DIGITAL CURRENCIES (CBDC) & STABLECOINS

## ASSESSING A NEW MONETARY PARADIGM

Blockchain applications - regulation, policy & strategy



# LOCKCHAIN

2021 NOVEMBER



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# 1. APPG Blockchain Evidence Meeting on Central Banks Digital Currency (CBDC) and Stablecoins

## Purpose

The purpose of the All-Party Parliamentary Group on Blockchain (APPG Blockchain) is to ensure that industry and society benefit from the full potential of blockchain and other distributed ledger technologies (DLT), making the UK a leader in Blockchain/DLT's innovation and implementation.

This Report of the 20<sup>th</sup> Evidence Meeting explores Central Bank Digital Currencies (CBDC) and stablecoins. It provides a summary of the takeaways from the Evidence Meeting.

The Video recording of the session is available on our websites:

- APPG Blockchain <https://uk.bicpavilion.com/about/appg-blockchain> and
- Big Innovation Centre [www.biginnovationcentre.com/](http://www.biginnovationcentre.com/)

## Details of the Meeting

- Date 27 October 2021
- Time, 17:30 – 19:00 BST
- Location, Virtual House of Commons, London
- Participants, 138 attendees

## Panellists: Evidence Givers, Chair & Secretariat

The evidence meeting was Chaired by the APPG Blockchain Chair Martin Docherty-Hughes, Member of Parliament. Big Innovation Centre acts as the Secretariat for the APPG on Blockchain, led by CEO Professor Birgitte Andersen and Fernando Santiago-Cajaraville. For this evidence meeting George Farrer is the Rapporteur.

The 20<sup>th</sup> APPG on Blockchain Evidence Meeting aimed to inform Members of the House of Commons and House of Lords about the current developments in using Central Bank Digital Currencies and stablecoins. Assuring representations from across stakeholders, The APPG meeting on digital assets had evidence giving from:

- *Regulator – U.S. Securities and Exchange Commission*
- *Stablecoin space – Diem Association*
- *Academia – Sciences Po School of Management and Innovation*
- *Blockchain Industry – Stratis Platform*
- *Financial Industry – Finality International*

### Evidence givers



**Natacha Valla**  
Dean, **Sciences Po's School of Management and Innovation**



**Christian Catalini**  
Co-Creator & Chief Economist, **Diem Association**



**Commissioner Hester M. Pierce**  
Commissioner, **U.S. Securities and Exchange Commission (SEC)**



**Jonny Fry**  
Advisor, **Stratis Platform**



**Rhomaïos Ram**  
CEO, **Finality International**

### Chair



**Martin Docherty-Hughes MP**  
House of Commons, **UK Parliament**



**Secretariat:**  
Professor **Birgitte Andersen**  
CEO **BIG INNOVATION CENTRE**



**Secretariat:**  
Fernando **Santiago-Cajaraville**  
Project Manager, **BIG INNOVATION CENTRE**



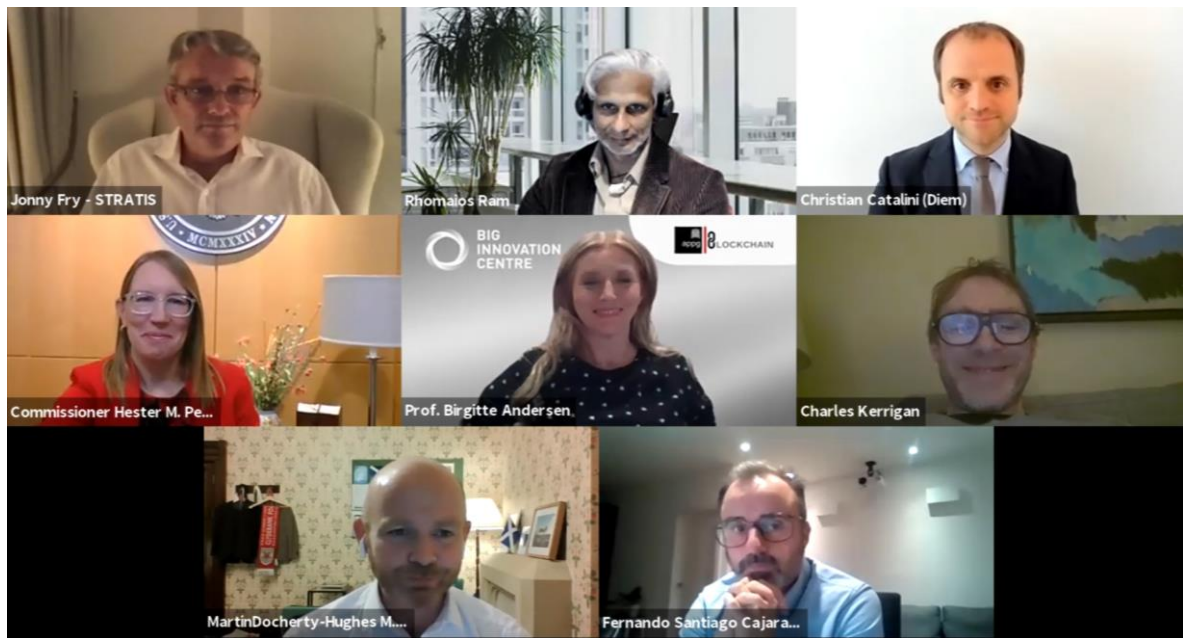
**Secretariat:**  
George **Farrer**  
Rapporteur **BIG INNOVATION CENTRE**

## 2. Background

The meeting's primary goal was to understand the current developments in Central Bank Digital Currencies and stablecoins. The APPG on Blockchain has brought together global perspectives from different institutions, academia, and businesses.

The speaker's panel addressed the following questions to assess a new monetary paradigm:

- What is Central Banks Digital Currency (CBDC)?
- What are the opportunities and challenges for CBDC and how should CBDC be designed?
- Should CBDC be a substitute or a complement to physical notes?
- What technology could CBDC use?



### 3. Meeting Takeaways

#### 1) Central Banks are now adopting Digital Currencies

Central banks have taken a long time to adopt digital money, and they have been triggered to move into the space due to the pace of the private sector in such technologies. In terms of economic activity our lifestyles are changing, and data is becoming more important to everything we do, through the use of smartphones which are crucial to our lifestyles – in the work environment and private life.

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*They recognize that data is a dimension of everything today and that data has value, which was not really the case with other forms of Central Bank currency.*

*(N. Valla)*

*The gold standard for any stablecoins, would be a central bank digital currency.*

*(C. Catalini)*

*We're seeing banks, governments and financial institutions realizing that the technology that can drive some of these digital currencies can have some really important beneficial impacts on society as a whole. (J. Fry)*

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The pace of central bank digital currency (CBDCs) implementation is increasing. We are seeing pilots taking place in the Euro system. CBDC could be a way for the Central Bank to keep a direct connection to the citizen through a digital Euro, or digital Pound.

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*I would like to take an illustration of the way that the speed of central banks has evolved, regarding CBDCs. In 2020, the European Central Bank issued a report on CBDCs, saying there might be a scenario in which we want to develop. Now in 2021, we are seeing real pilots in the Euro-system. (N. Valla)*

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#### 2) Central Bank Digital Currencies (CBDC) allow for more competition

Central Bank Digital Currencies (CBDC) will allow for more competition within the sphere, through new waves of innovation and lower barriers to entry. However, this means some new regulations

may be required. Competitive forces will be at play, as there would be lower switching costs for consumers.

Blockchain allows for the removal of intermediaries, so where there are not clear identified intermediary barriers to entry are lowered and access to the industry is easier. Additionally, blockchain can help speed up transactions, in turn making them cheaper with limited 'clogging-up' in the middle of the process, leading to a faster, much simpler system.

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*What we look forward to is more competition, a new wave of innovation and payment financial services and some ... other digital platforms. Lower barriers to entry, so new start-ups coming into the system can provide services in a novel way. (C. Catalini)*

*The property [ed. Technology] will cost a lot less and it is less balance sheet intensive, because you don't need to hold buffers against things not happening. (R. Ram)*

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### **3) Central Bank Digital Currencies (CBDC) strengthen transparency and create a digital footprint**

Blockchain and CBDCs allow for transparency and through a digital footprint within the ledger – we are able to see who owns what, how they acquired it, and where it came from. This is good from a compliance view for banks. CBDCs therefore allow for a proper collection of tax revenues, especially within the informal economy. Cash in hand payments do not lead to tax being collected in the right manner, so CBDCs would enable people to not get away with not paying the tax required.

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*So rather than digital currency as being seen as something which people should be frightened of because you can move money not through the normal system, it effectively leaves a digital footprint. (J. Fry)*

*However, as we start seeing assets such as equities, bonds, commodities, property and currencies being able to be traded in real time, it'll give the regulators and it'll give the compliance and the risk management and departments, the ability to see in real time, who owns those assets. (J. Fry)*

*The markets have moved on, and we have the opportunities to strip out a lot of the intermediaries in payments and transactions, therefore digital payments would*



*make it all more secure. (J. Fry)*

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#### **4) Regulators face unique challenges and opportunities**

The growth of stablecoins is facilitating decentralised finance which poses a unique challenge for regulators – whatever we do regarding stable coins will have an effect on this. There might be opportunities for financial intermediaries that could be created in the world of central bank digital currencies (CBDC) and stable coins. The absence of clearly defined intermediary is due to the removal of the control that they have over our lives today.

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*Central Banks in developing CBDCs will have to be careful in protecting the stability there. I think, on the contrary, there will be a lot of business opportunities for financial intermediaries to be made in this transition to a CBDC world (N. Valla)*

*Often regulation works through intermediaries, but with many of these marketplaces and platforms, there is not a clear identified intermediary given that a key part of this is removing the control or market power that some of these intermediaries have over our lives today. (C. Catalini)*

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When we are imposing new regulations on stablecoins, we have to wonder what the reductions in benefits of the technology will be. Or will the regulations make the technology better for the public good?

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*The Securities and Exchange Commission (SEC), among other US regulators is now confronting the fact that stablecoins have grown quite dramatically in use, so we're all looking at each other and asking what are the regulatory implications of this growth? (H. Pierce)*

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## 4. Evidence Giving

### 4.1. Natacha Valla, Dean, Sciences Po Paris' School of Management and Innovation



One fundamental characteristic beyond the users and the functions of money that everybody knows is trust. Trust goes beyond a weakly defined psychological feature, it is something that is very articulated and articulated with the way in which we all interact together, we all make society our collective entity. These articulations are the something that we developed, with three others. One is methodological, the second one is hierarchical, and the third one is ethical. Methodological is very easy, it's very horizontal, it is the routine role of money. The way we use money to exchange, the famous functions to store value to use daily lives. This is the sort of legitimacy that we get by the usage by the repetition of having money into our lives.

There are two other dimensions to the legitimacy of money and the rule of money for us. The second one is hierarchical. It really pertains to the role of money, and therefore the Central Bank as a pivot in the payment systems. The payments dimension of money is very key in the development of stablecoins, or the alternatives and as an argument for the development of Central Bank digital currencies (CBDC). So, being a pivot in payment systems is key, and the Central Bank, as of today, is also the guarantor of the ultimate settlement ultimate finalization of payments.

The third one, ethical, comes to the fact that central banks in the constitutional order that is characterizing our systems are the centrepiece of this order; the other delegates of the state of the sovereignty of the monetary order. It's not just anything, it's a representative of the sovereign expression of us being together, as such, it is that legitimate issue of money.

### **Why are Central banks now moving towards CBDC?**

The central banking community has taken a long time to recognize that it might be a good idea to be in the digital space, at least in that way.

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***Central Bank's suddenly recognize that they should increase the pace of adjustment, because of the challenges in the world we live in.***

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We live in a world where phones have become completely pervasive to our lifestyles, in terms of productivity in the work environment or also the private life. Central Bank's recognize that data is a dimension of everything today and that data has value, which was not really the case with other forms of Central Bank currency. They recognized in terms of economic activity that our lifestyles are changing.

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***These technologies can be extremely useful for the fulfilment of fundamental functions and of their mandates in terms of macroeconomic stability, or growth objectives.***

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This has been triggered by fast pace at which the private sector has been developing those technologies. I hope that there can be a hybridization between this technological excellence and the functions and the fundamental role, both democratic and constitutional, of central banks, expressed through CBDC's.

The first reason why we are going to have CBDCs is the evolution of the economy - the evolution of the way we produce value collectively. Second, the progress, and the changes in the payment system space. Here there's a stability argument but also an efficiency argument because the payment function is so closely related to the concept of money, they cannot afford to be left out of it. There's also the dimension of cash. The use of cash, at least for transaction purposes in many places in the world is really going down, so there needs to be a way for Central Bank's to keep the direct connection to the citizen. This direct connection to the citizen used to be the bank note, but now could be a digital Euro or a digital Pound.

There are also dimensions that are not so univocal, but I think are very important. Those are,

international dimensions related to the implementation of CBDC, and related to the coordination of CBDC initiatives across different monetary areas with different currencies. The way CBDCs and networks of CBDCs can complete the international monetary system. So far, for currencies to interconnect with each other, we've had foreign exchange (FX) markets, but we also had some kind of hybrid expression of sovereign money. Another one was the Special Drawing Rights (SDR), of the International Monetary Fund (IMF). This was a useful concept, but a very embryonic one and the implementation of CBDCs by all major currency areas would allow us to see how they can interconnect and how they can ensure international financial stability. The other international dimension is the cross-border payments dimension.

### **Concluding Remarks**

I want to conclude on the worries that central bankers might see and might express through moving towards implementing CBDC. They were worried by seeing crypto assets, in particular stablecoins, the ones that come close as close as it gets to sovereign currencies. They might worry because it's a very lucrative business about revenue – this is something that private initiatives have identified very clearly.

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***We need a digital currency area to match a digital economy.***

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Another dimension, which is not so much a worry for Central Banks, but small for financial intermediaries around them, is the role of financial intermediaries in a world where CBDCs are implemented. The role of the banking system in intermediating and transmitting monetary policy, but also in doing the job of deposits collection and credit making. I would not worry about this, because central banks only have incentives to protect the financial ecosystem that has been made safe, regulated and stable with a long history of interaction with themselves. Central Banks in developing CBDCs will have to be careful in protecting the stability there. I think, on the contrary, there will be a lot of business opportunities for financial intermediaries to be made in this transition to a CBDC world. I believe this is imminent due to the fact that we see CBDCs being implemented in some places already. I would like to take an illustration of the way that the speed of central banks have evolved, you know regarding CDBC. In 2020 the European Central Bank (ECB) issued a report on CBDCs, saying there might be scenarios on the which we want to develop. Now in 2021, we see real pilots in the Euro system. Steps are being made with a lot of brain power and a lot of resources allocated on this. My hope is that they go as fast as possible into implementing the solution and then take this to the citizen, including them into the ecosystem of the fantastic technological advances that have been brought forward by the private sector.

## 4.2. Christian Catalini, Co-Creator and Chief Economist, Diem Association



From an economics perspective, what is really exciting about what's happening within blockchain and crypto currencies is that the tools that we're now provided with, are really ideal for creating new types of digital platforms. Platforms where you do not have to assign control to a centralised intermediary. When you look at digital platforms, a lot of the concerns arise from the role that the platform architect can have in the systems.

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***What's different about blockchain is that the tools that the technology provides are really a way for enabling a levelling playing field between different participants coming and providing services to consumers and businesses.***

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A lot of this has to do with interoperability. This that technology that allows the consumer using say one digital wallet to send and receive payments from the consumers of a much larger digital wallet with an install user base. So, it's really in a very efficient way to countervail some of the established network effects that favour incumbents in payments and financial systems.

There are a few building blocks behind the technology. One is interoperability that I've already mentioned. The next one is programmability. So, think about a situation like COVID-19 where governments were trying to get stimulus checks and stimulus in the hands of consumers, like conditional payments. This technology can enable a lot more to be done here, in the form of international aid for example and for sorts of other public sector efforts. This this wave of change

is starting within payments and financial services. You probably have heard about decentralized finance doing a similar transformation within finance. Also, more broadly all sorts of digital platforms that engage consumers and creators around the curation of content, the sharing of social content and, alike.

## Benefits

Now what's interesting is that, there are some clear long term benefits, and of course there's work to be done for these to be realized:

- We look forward to is more competition, a new wave of innovation and payment financial services and some of these other digital platforms.
- Lower barriers to entry, so new start-ups coming into the system can provide services in a novel way.
- From a consumer merchant perspective, lower switching costs, so they will not be locked into any particular solution and ideally, they'll be able to move between different ones, through competitive forces.
- Better privacy: this is a technology that lends itself really well to privacy, also in a compliant fashion.

## Risks

Of course, with any new technology it's not just about benefits there's also new risks. From a regulatory perspective, how you approach to regulation of this space may require novel approaches. Often regulation works through intermediaries, but with many of these marketplaces and platforms, there is not a clear identified intermediary given that a key part of this is removing the control or market power that some of these intermediaries have over our lives today.

## Stablecoins

I would say stablecoins are probably the first example at the interface, of our cryptocurrency in the mainstream. Although most of these assets today are not used for retail applications or merchant payments, there's potential in taking the technology and improving how payments and financial services operate in the economy.

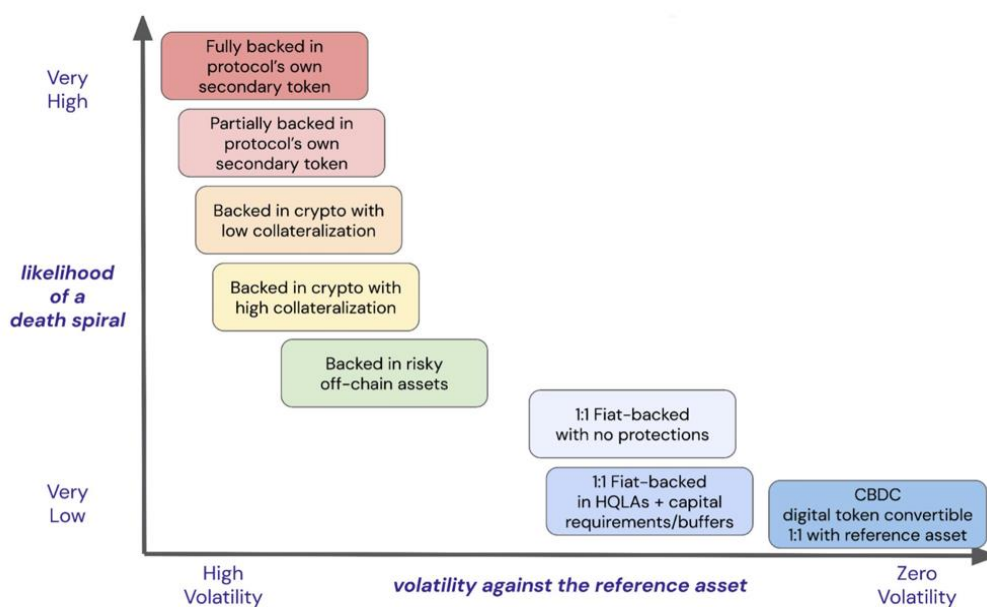
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***The long-term potential here is about improving access and competition in payments and financial services.***

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There's been a number of calls for a more robust economic design, in the space of stablecoins. Here is a quote from Governor Brainard that compare some of the efforts happening today to banking in the 19<sup>th</sup> century:

*“A predominance of private monies may introduce consumer protection and financial stability risks because of their potential volatility and the risk of run-like behaviour. Indeed, the period in the nineteenth century when there was active competition among issuers of private paper banknotes in the United States is now notorious for inefficiency, fraud, and instability in the payments system.”* – Governor Lael Brainard (2021)



There's truth to some of these concerns and I think one of the challenges when approaching this space is that the word stablecoin is fundamentally, a misnomer. We have an economic research paper, where we try to unpack all the different types of so called stablecoins out in the market. When you look under the hood they have very different assumptions:

- Whether it's in terms of economic properties of these assets,
- how they would perform say in stressed market conditions,
- what they would do if, for example, consumers were to lose faith in the ecosystem around the stablecoin.

Unfortunately, some of these assets are designed in a way, where they could run into a full death spiral. Think about our traditional currency board that mismanages its accounts and therefore there is a run on the currency board and the depreciation. However, I think there's a clear roadmap for building very robust stablecoins and a lot of this is really importing a lot

of the work that's been done in financial services. Thinking about not only stable currencies that are backed one for one with high quality liquid assets, but also those that have the required capital buffers around to ensure that even in stress market conditions, they can always meet on demand redemptions. Building on the on the classification, you can think of the gold standard for any stablecoins, so to speak, would be a central bank digital currency (CBDC).

### **Stablecoins & The Future of Money**

In a recent piece I co-authored with Jai Massari in the Harvard Business Review, we tried to be constructive and proposed a few models going forward in this space. There's often this idea that stablecoins are competing with CBDCs and competing with the public sector. However, when you take a step back there's a lot more opportunity for collaboration in this space. There's been questions around: how do you create sound money when you're moving from a world where banks are working on money creation versus one where maybe you also have new types of entities that can provide payments and other services over time in a slightly different form? What we identified are at least three, not mutually exclusive, paths to not only delivering some money in the hands of consumers, but also working at the interface of the public and private sector in a way that can be extremely constructive:

- First, true stablecoins. Think of these as one-to-one back with high quality liquid assets (HQLA), narrow bank-like institutions that are really targeting a medium of exchange, a payment tool, something that can really lower cost and predictions for merchants and businesses.
- The second category, deposit stablecoins, builds much more on the traditional protection we already have in most countries around deposits – think about bank capital requirements.
- The last one, which we think is potentially the most interesting in the long run, is this idea of CBDCs on multiple private sector rails.

You could also have competing public sector rails for ensuring universal access and that citizens and others will always have access to a central bank liability. You can imagine the public sector really working on a public private partnership where, as you work towards CBDCs and stablecoins rails when properly designed, and they able to address all the concerns around anti money laundering, for example. This can be a complement to what the public sector is doing in this space. Here's a quote from the Bank of England that surfaces the strong complementarity between what the private sector and public sector.



*“An approach to CBDC where the Bank of England does everything, with no private sector involvement, is unlikely to meet most of our design principles. Such a CBDC may be resilient, fast and reliable. But it would not be open to competition, may not support innovation, and would not be designed around the respective strengths of the Bank and private sector.” – Bank of England*

### **Concluding Remarks**

I'll close by really emphasizing that again, often in the narrative between stablecoins and CBDCs it's often described as a war between the two, as a race to deploying these. Yet, very much like the early days of the Internet, here you have a very similar model that again builds on a history that we have in creating some money through private-public collaborations. Those that can really deliver new use cases, more financial inclusion and importantly, more competition in payments of financial services.

### 4.3. Rhomaios Ram, CEO, Fnality International



To achieve the outcome of creating a safe, regulatory, compliant, digital cash settlement asset compatible assets, we at Fnality and our investors – some of the systemically most important banks – will develop a set of independent interoperable payment systems in multiple jurisdictions. Obviously, the UK, but also the Euro, US, Japanese and Canadian jurisdictions. All of these would be based on blockchain protocols. Also, each one of these must be able to achieve settlement finality according to local laws and use settlement asset with a credit quality, very similar to central bank money.

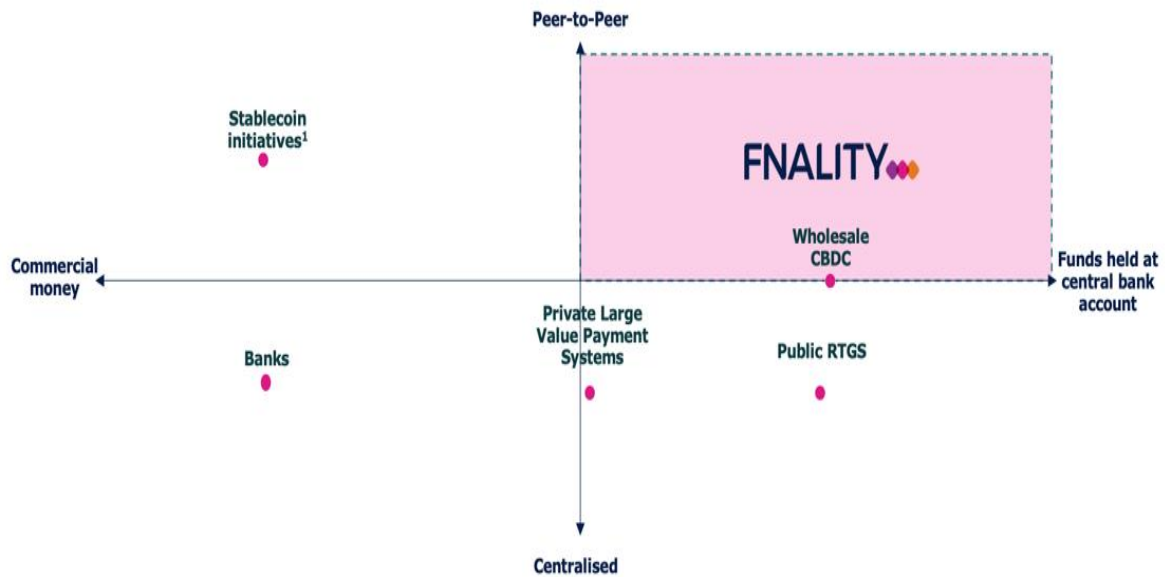
#### Advantages of Fnality

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***Our payment systems will settle real time payments in a single currency, as well as foreign exchange instantly and provide the cash leg for settlement of securities transactions, so you can do all of this instantly and interoperably.***

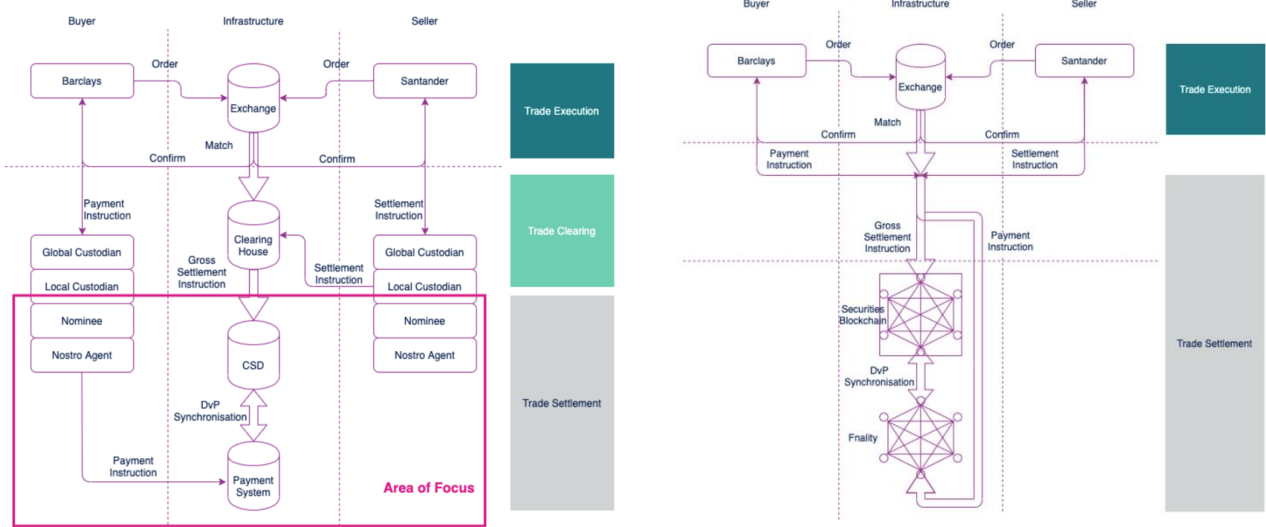
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Effectively we're creating a synthetic Central bank digital currency (CBDC). It's synthetic because, in the case of UK, the Bank of England is not the issuer of the settlement asset, the settlement asset does have the same credit risk as central bank money. Our focus is on wholesale, so we're talking about the capital market sphere, not at all talking about retail. How do we do this? Crucially, the credit profile is achieved through the opening of a prefunded omnibus account. The Bank of England just announced a policy like that, the US already has this type of account and so does Europe.



Where do we fit in such ecosystem of different initiatives? - see above figure. This is very arbitrary, but I picked two axis that don't tell the full story but should be enough to tell you the main things that people are worried about today. The X axis is the difference between commercial bank money and central bank money. Commercial bank money is obviously the money that you have like Barclays or Deutsche Bank. Central bank money is obviously money is backed by the Central Bank. The Y-axis is about the issue of centralization versus decentralization, so peer to peer and what we're trying to do.

In the bottom left-hand quadrant are banks because it's commercial banks. Banks are also centralized so that makes total sense. Stablecoin initiatives typically are also backed by something, so they'll probably be more in the commercial bank money space. We could make an argument about whether they are a fund or commercial bank money but they're essentially in that commercial space and they have the characteristic of being much more peer to peer so the more decentralized. The public real time gross settlement (RTGS) system in the UK is centralized but as central bank money. There are private payment systems that large value payment systems, like CLS in the UK, which are somewhere close to the line of being between commercial bank money and central bank money. We fit in under peer to peer and nearly like being a central bank digital currency so there's no one that is in our space, we are in that top-right quadrant.



So how are we going to improve the world? This is a schematic you don't need to understand everything that's on here (left). At the top, you can imagine there's a buyer of equities. They could place orders and, in exchange, want to buy and want to sell and they match that's fantastic, and everyone has a good understanding of that they probably match on the London Stock Exchange. What happens next is where all of the inefficiency is currently in wholesale capital markets. They, after finding each other on the exchange, basically pass the instruction into their operation, the operational parts of their businesses. Within is various intermediaries, that help them settle those transactions. They have something called the global custodian; they have local custodians they have nominees they have nostro agents. These are all involved in finding the same transaction, finding the money, and then putting the right instructions into the clearing house and into the payment system to allow for some sort of synchronization between the payment of the money versus the payment of the security. Technically this is called delivery versus payment. This looks complicated for a reason, because it is very complicated and an expensive process – not just operationally expensive but also creates a lot of balance sheet charges due to the operational efficiencies, this creates a lot of risk for the market.

***When you put a system like Finality in (right), and you have the equivalent securities and blockchain, you see the picture get much simpler.***

It allows for the removal of a lot of different intermediaries in the roles that they currently have, and so you end up with a much faster, much simpler system. The property will cost a lot less and

it is less balance sheet intensive, because you don't need to hold buffers against things not happening.

### **Bank of England Omnibus Account**

In April, the Bank of England published the policy around the omnibus account. Essentially, they are creating an omnibus account, where different members will put money into the account and then underneath it there will be a payment system that essentially credits and accounting system with the ownership of the funds in that account. So, if Member-A puts in 100 and Member-B puts in 100, then there's 200 in there, then Member-A can be paying Member-B and vice versa, until eventually one of the members wants to take money out of it and they can defund the overall account.

Where our blockchain fits in, is we are the payment system and the blockchain is essentially an accounting system that records the ownership of what's in that omnibus account. That's the mechanism by which it works. It's similar, mechanically in all of these stablecoin arrangements, with the record of ownership changed on the blockchain.

### **Private & Public Sector**

We don't think it would be a good idea to completely crowd out the private sector, with just the public sector arrangements. We think there is benefit to allowing the private sector to flourish and possibly even getting into private sector-public sector partnerships in some way. We think there's a way to do it, even with our arrangement. Speaking about the UK specifically, there's a lot going on with blockchain in the UK and speaking with my company's interest in mind we would like to be able to hire as much talent as we can. So we'd appreciate efforts to help us be able to import the talent.

### **Concluding Remarks**

My final point is that the UK can speed this adoption of blockchain in traditional markets up by essentially doing things like issuing government bonds on blockchain when those come about. It could be that the Treasury decides to issue off some sort of some proportion of the next issuance on blockchain and people can start interacting in that, and that can be a driver towards making the UK a centre for this type of innovation.

#### 4.4. Jonny Fry, Advisor, Stratis Platform



I'd like talk to you initially about some of the potential use cases in particular for stablecoins. When we talk about certainly Central Bank digital currencies (CBDC) and stablecoins, what people tend to get focused is the payments and transfers and say, what we need to do is have a digital currency, because that will then enable us to make payments more efficiently and quickly. Without a doubt, this is very important. However, I think what's interesting if we look at the development of digital currencies, and we look at for example, the dreaded bitcoin and cryptocurrencies what we've seen over the last five years, is a complete turning on your head, in the sense of those people that are interested in engaging in this.

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***The situation four or five years ago was that all the talk was about cryptocurrencies, and it was basically the cyberpunk people that wanted to get around the banks, get around the regulators, and be able to move value and move money in a discreet way. Now, what we're seeing is the opposite.***

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We're seeing banks, governments and financial institutions realizing that the technology that can drive some of these digital currencies can have some important beneficial impacts on society. Just in the UK we have 1 million people who are unbanked. Globally, we have something in excess of 1.7 billion. Yet out of that 1.7 billion, according to the World Economic Forum (WEF), 66% of those people have a mobile phone and therefore would be able to become banked and would be able to come into the financial system if they were able to have access to some form digital currency that they could trust, and they can move between themselves.

## Transparency

Talking about alternative use cases, we believe at Stratis that stablecoins are a new friend of governments, regulators and treasury departments. The reason for this is transparency. Blockchain technology can give us transparency about information within the ledger: who owns what, how and where does it come from? So rather than digital currency as being seen as something which people should be frightened of because you can move money not through the normal system, it effectively leaves a digital footprint. Now that's important because, from a compliance point of view, as one of the challenges for banks or any regulated company is being able to manage risk and prove that they've managed the risk.

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***What stablecoins effectively do is have the ability to be able to create structured information, and then with that structured information, you can overlay smart contracts***

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Thinking in very simplistic terms these are like a flow chart. If this happens, then we make the payment. If that happens, we don't make the payment.

One of the reasons we have financial services regulated around the world is to treat customers fairly. Let's look at this situation of a dividend. Let's say I own shares in BP, and I decided to sell my shares in BP after five months and 30 days, then you decide that you want to buy those shares. What happens is that I've had all the risk of owning those BP shares for five months and 30 days, then you come along, and you buy the shares the day before it goes ex-div. You get the dividends, and I don't get the income. In the same way right now in Wall Street, you have no idea who owns Microsoft, Tesla, IBM, or any quoted company, nor do we have any idea, right now, who owns those companies in the UK. In about two- or three-hours' time when the share registrars have totted out the buys and sells will be able to give you a picture in time. However, as we start seeing assets such as equities, bonds, commodities, property, and currencies being able to be traded in real time, it'll give the regulators the compliance and the risk management and departments, the ability to see in real time who owns those assets. We'll be able to start paying coupons and dividends and rental income based on the duration of holdings, therefore treating our customers more fairly in a way it's just impossible with sort of paper based analogue type systems.

Due to this transparency, there is no reason why, using the example of BP, if they had their own coin and they could then pay possibly their staff and suppliers in their own coin, but the money itself is held by one of the clearing banks. Here, there is no extra risk, but it means they can move their money around much more clearly and more easily. There's no reason to why they couldn't

say to their bankers, to their shareholders, and potentially governments, this is what our cash position is on a weekly basis, as opposed to having to wait for interim and final accounts.

### **Stablecoins vs. Payment Platforms**

We have the ability with stablecoins in particular for the banks to start competing against the payment platforms. Companies like ApplePay have over 500 million customers, PayPal is worth almost 50% of the same as the biggest bank outside of China of JP Morgan. Visa is worth something nearly the same as JP Morgan. What they've been doing is embracing digital currencies, and in the last 24 hours (27<sup>th</sup> October 2021) Mastercard have announced that they are going to be able to say to their 20,000 businesses that are regulated and the millions of merchants, and the 2.8 billion cards that they've issued, you can start using digital assets. Maybe they're saying we're now putting down the infrastructure which will enable CBDCs to be able to issue them.

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***There's potentially a huge opportunity to see arguably the biggest asset class in the world, I-derivatives, moving on to blockchain related platforms. Therefore, if they're doing that, why would they go back to the paper-based systems, whereas now they could use a digital currency?***

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Some of the work we've been doing at Stratis has been looking around interesting opportunities surrounding this. Additionally, the Depository Trust and Clearing Corporation (DTCC) in the US, last year settled \$10 trillion worth of derivatives – they are looking to implement smart contracts on a blockchain powered platform. The markets have moved on, and we have the opportunities to strip out a lot of the intermediaries in payments and transactions, therefore digital payments would make it all more secure.

One of the huge areas I think we will see stablecoins used in, is around loyalty schemes. It was interesting to see in France, 'Casino', a supermarket with 11,000 outlets in Europe and Latin America, have created their own stablecoin. In the first three months, although it's only got €7 million of value in it, it's had a turnover of over €100 million – this indicates the potential demand. Other global firms, such as Coca-Cola, Amazon, Microsoft, Visa are accepting these digital currencies, and what we're seeing increasingly is some of the systems and processes that we have now in the banking world are not fit for purpose.

### **Informal Economy**

The big problem the world is facing, is the shadow, informal economy. The informal economy employs about 1.8 billion a year, where tips in restaurants and cash for cleaning cars are doing



governments out of tax.

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***An increased use of stablecoins and a CBDC would enable people to be more inclusive, and they will no longer be able to not pay the tax that is required.***

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Cash is responsible for billions of nefarious activities, and it's the banks that are being fined billions.

I think the main thing is that this isn't about just bank settlements and bank transfers of money, this is something which is going to impact right across society and it's something which we have to grasp before other countries steal a march on what's happening in the UK.

#### 4.5. Commissioner Hester M. Pierce, U.S. Securities and Exchange Commission (SEC)



##### Disclaimers

I do have to start with a few disclaimers. First, the views that I represent are my own views and not necessarily those of the US Securities and Exchange Commission (SEC) or my fellow Commissioners. Second, I would say I'm not an economist and third, if I were an economist, I would not be a monetary economist I'd be a micro economist.

##### Stablecoins

The SEC, among other US regulators is now confronting the fact that stablecoins have grown quite dramatically in use, so we're all looking at each other and asking what are the regulatory implications of this growth? If this growth trend continues, what are the potential financial stability implications, what are the potential customer or investor protection implications? Therefore, how do we need to be thinking about this? Because the growth of stablecoins is facilitating the growth of things like decentralized finance which pose unique challenges to regulators, whatever we do in the space with respect to stablecoins will have follow on effect, so how are we thinking about that?

It is very much alive conversation in the US now. We have not yet sorted out who has jurisdiction over stablecoins. There has also been state involvement - there are a lot of federal financial regulators in the US, but this is an area where state regulators have also got involved, so I think

one message I have for you is just stay tuned to see what happens in the US.

As I think about regulation in this space, there are a few things that I think are important to remember:

- First is that people are finding stablecoins to be valuable and so we should, as we think about regulation, and we think about imposing new burdens on stablecoins, we need to think about the reduction in benefits will be and take that into account.

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***Second, we must be very careful with broad generalizations. There's a lot of variety and stablecoins, I think we heard some about that already today, so making sure that as we think about regulating, we're not writing one size fits all rules.***

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- Third, while stablecoins are new, there are a lot of other things that look a lot like stablecoins out there, and so, for writing rules intended to capture stablecoins, we may will capture something else.
- Fourth, in the US there been a lot of conversations and comparisons between stablecoins and private currencies of the 19th century in the US, private bank notes for example. I think that some of those conversations have been a bit ill-informed in terms of what happened and what led to some of the dynamics with those private bank notes in the past. There have been very successful systems, including in Scotland with private bank notes, so we should bear that in mind as we try to draw parallels. They may or may not work well.

I would also say, quoting from a banking regulator, Federal Reserve Vice Chair Randal Quarles explained:

*"We do not need to fear stablecoins, the Federal Reserve has traditionally supported responsible private sector innovation. Consistent with this tradition, I believe that we must take strong account of the potential benefits of stablecoins, including the possibility that a US dollar stablecoin might support the role of the dollar in the global economy".*

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***I think stablecoins are an interesting development and maybe the American answer to a Central Bank digital currency (CBDC) that other countries might want to adopt.***

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We like to allow competition, which having multiple private stablecoins will do, and we also like to have a little bit of a buffer between people's private financial transactions and government oversight. Financial privacy is fundamentally important, what people do with their money goes very much to the core of who they are. We must be very careful to guard that, and that's why stablecoins may have a leg up on CBDC.

## 5. Speaker Bios



**APPG BLOCKCHAIN  
EVIDENCE MEETING**

**CENTRAL BANK DIGITAL CURRENCIES & STABLECOINS**  
**ASSESSING A NEW MONETARY PARADIGM**

WEDNESDAY 27TH OCTOBER 2021 17:45 - 19:00 PM LONDON-TIME - GLOBAL WEBINAR

**EVIDENCE GIVERS FROM LEFT TO RIGHT + Chair**

- **Natacha Valla**, Dean, **Sciences Po** School of Management and Innovation
- **Rhomaïos Ram**, CEO, **Fnality International**
- **Hester M. Peirce**, Commissioner, **U.S. Securities and Exchange Commission**
- **Jonny Fry**, Advisor, **Stratis Platform**
- **Christian Catalini**, Co-Creator & Chief Economist, **Diem Association** (Facebook-backed digital currency)

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### **Natacha Valla, Dean, Sciences Po's School of Management and Innovation**

Natacha Valla is a French economist and Dean of the Sciences Po School of Management and Innovation. She was Deputy Director-General for monetary policy at the European Central Bank from May 2018 to January 2020. She is also chair of the SUERF, European Money and Finance Forum, editorial board.

### **Rhomaïos Ram, CEO, Fnality International**

A former Banking Executive with 22+ years of experience, including most recently Global Head of Product Management for Transaction Banking at Deutsche Bank, Rhom has developed an interest in creating digital businesses for finance and finance-related areas.

He brings the experience of working across a wide variety of wholesale banking businesses and functions, including sales, trading, product management, and technology, to his role at Fnality. The majority of his experience has been developing businesses where the product is at the intersection of finance and technology.

Publications,

- Ram, R. (2021) 2021: The Year of DFMI
- Ram, R. (2021) *Are Stablecoins a threat to Capital Markets Incumbents?*
- OMFIF. (2021) *Fnality's Global Payment Solution*. 29 April.

### **Commissioner Hester M. Peirce, U.S. Securities and Exchange Commission**

Hester M. Peirce was appointed by President Donald J. Trump to the U.S. Securities and Exchange Commission and was sworn in on January 11, 2018.

Prior to joining the SEC, Commissioner Peirce conducted research on the regulation of financial markets at the Mercatus Center at George Mason University. She was a Senior Counsel on the U.S. Senate Committee on Banking, Housing, and Urban Affairs, where she advised Ranking Member Richard Shelby and other members of the Committee on securities issues.

Commissioner Peirce served as counsel to SEC Commissioner Paul S. Atkins. She also worked as a Staff Attorney in the SEC's Division of Investment Management. Commissioner Peirce was an associate at Wilmer, Cutler & Pickering (now WilmerHale) and clerked for Judge Roger Andewelt on the Court of Federal Claims.

Commissioner Peirce earned her bachelor's degree in Economics from Case Western Reserve University and her J.D. from Yale Law School.

Publications,

- Pierce, H.M. (2021) *Lawless in Austin*.
- Piece, H.M. (2021) *Token Safe Harbor Proposal 2.0*.

### **Jonny Fry, Advisor, Stratis Platform**

Jonny Fry, Stratis Platform Ltd advisor. He founded, and was the CEO 20+ years, Premier Asset Management Plc, a mutual fund company listed on the London Stock Exchange.

He writes Digital Bytes, a weekly analysis of how, why, and where Blockchain Technology and Digital Assets are used in different industries and jurisdictions globally. It has its' own radio show, which is broadcasted to 140+ countries.

### **Christian Catalini, Co-Creator and Chief Economist, Diem Association**

Christian Catalini is a co-creator of Diem (formerly Libra) and the Chief Economist of the Diem Association. Christian is the founder of the MIT Cryptoeconomics Lab and a Research Scientist at MIT. While a Professor at MIT, Christian designed the MIT Digital Currency Research Study.

In 2018, Christian was appointed as a Faculty Research Fellow in the Productivity, Innovation and Entrepreneurship Program at the National Bureau of Economic Research.

Christian's research focuses on blockchain technology and cryptocurrencies, and he previously worked on the economics of equity crowdfunding and startup growth and the economics of scientific collaboration.

He holds a PhD from the University of Toronto (Rotman School of Management) and an MSc (summa cum laude) in Economics and Management of New Technologies from Bocconi University, Milan. His research has been featured in Nature, Science, the New York Times, the Wall Street Journal, the Economist, WIRED, NPR, Forbes, Bloomberg, TechCrunch, the Chicago Tribune, the Boston Globe, VICE news and the Washington Post, among others. Christian has presented his work at a variety of institutions, including Harvard University, MIT, Yale University, London Business School, New York University, UC Berkeley, Stanford University, the Federal Reserve Bank, the U.S. Treasury, the U.S. Securities and Exchange Commission, the Commodity Futures Trading Commission, the World Bank, the IMF, the White House OSTP, and a number of central banks and regulators.

Publications,

- *Catalini, C. and Massari, J. (2021) Stablecoins and the Future of Money.*
- *Catalini, C. and de Gortari, A. (2021) On the Economic Design of Stablecoins. 1-16.*
- *Catalini, C. and Lilley, A. (2021) Why is the United States Lagging Behind in Payments? 1-12.*

## 6. Contact details

### **APPG Blockchain Secretariat**

#### **Big Innovation Centre**

62 Wilson Street  
London EC2A 2BU  
United Kingdom

[info@biginnovationcentre.com](mailto:info@biginnovationcentre.com)

[www.biginnovationcentre.com](http://www.biginnovationcentre.com)





