Do we really need another lira, dollar, euro, pound or yuan? A critical reflection on CBDC

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Introduction

This blog will come in three parts. In this, the first part, we will quickly review what CBDC is, who is driving this development, what central banks are trying to solve and what the current state of play is. In the second blog we will discuss some of the concerns that have been raised – whether the goals are achievable at all, what the concerns of other stakeholders in the ecosystem (such as banks, merchants, end customers) are and why there is a real danger that this whole development may be a big global "flop". In the final blog we look at the advantages to all – not just the central banks who are driving this development – and why it may be worth all of us working together to make this new money a reality.

What is CBDC (Central Bank Digital Currency)

This paper will not enter into a detailed discussion of what constitutes a central bank digital currency (CBDC) as numerous excellent introductions are available elsewhere. For the purposes here, it is sufficient to quote Masaki Bessho, Head of the Bank of Japan's FinTech Center, and say that CBDC provides 'wide access to public money in the post-cash world' (simply put: electronic versions of coins and banknotes). At the moment only banks have access to central bank money (cash and deposits) and then distribute these to end-consumers and businesses. The idea behind CBDC is that everybody – not only banks – can access public (i.e. central bank) money. However, this does not mean that the man in the street can open an account at the Turkish Central bank – instead, CBDC will still be distributed via commercial banks like Isbank, Akbank, etc. So for starters, one can immediately question what is really new here and what problem CBDC is trying to solve !? Why do we need "electronic versions" of coins and banknotes at all since we already move our money around electronically very well !? How does one explain to the normal person that he will have some "Garanti Lira" in his bank account/wallet/app but also some "TCMB Lira" !? The "CBDC money" will be limited (e.g. to 3000€ per person to avoid a digital bank run), whereas the "normal money" can be held in unlimited amounts. CBDCs will likely offer no interest, whereas money on normal savings accounts return normal interest rates. The normal money has always been assured to be safe (and often guaranteed to 100.000€) – but now suddenly this new money is supposed to be even safer (being backed by the state) ? That all makes no sense to anybody.

However more than 100 central banks around the world (representing 95% of global GDP) are busy working on CBDC, some have even already rolled it out – notably China who already started with a task force almost 10 years ago. The Turkish Central Bank has also started publicly thinking about this[1].

So what are all these Central Banks trying to achieve given the already raised fundamental questions ?

Motivations for central banks, governments and policy makers

By a considerable margin, it is the central banks themselves that stand to benefit most from the introduction of CBDC. Some of the ideas proposed could be very real, but many of the commonly cited advantages go up in smoke upon closer inspection:

- We do not need CBDC for *digitisation* nor for *innovation*. We already have massive use of electronic funds (in some countries the use of paper cash for payments has almost disappeared) and payments is one of the global business areas with the most innovation of all.

- Some governments want to increase *inclusion* with CBDC (however they will need to solve the topic of eIdentity first)

- Some want to reduce the *cost of cash* distribution – this makes a lot of sense given the enormous costs associated with the distribution of paper notes and metal coins[2]. However, the use of cash for payments is already in steep decline in most economies, even without CBDC.

- Some (who do not care too much about privacy) want to *trace* their populations' spending, or – more positively – want to get more and *better data* about their populations' spending habits so that interest rates can be set more immediately and based on better real live economic data

[1] https://fintechistanbul.org/2022/09/28/tcmb-baskani-sahap-kavcioglu-cbdc-kullanim-olanaklari-uzerinde-calisilmasinin-onemine-degindi/

[2] For example:

— in the major 13 European countries, the ancillary costs associated with the provision of cash are approximately €22bn per year;
— in Japan, the cost of maintaining the ATMs alone is ¥700bn per year;
— in USA, the Fed pays approximately US$800m per year to print new currency;
— the UK, the Royal Mint levies a fee of 12 per cent to print cash (eg £60m to make £500m);
— in the Bahamas — an archipelago of 700 islands, where hurricanes are frequent — cash distribution is particularly fraught;
— in Sweden, the outer reaches of which are also hard to reach, cash use is rapidly tending to zero, so that any remaining bank notes and coins have very poor unit costs.

If cash could instead be distributed electronically – the idea behind CBDC – these costs could be massively reduced.

- Some regulators see an opportunity in CBDC as giving legitmacy to *banning crypto*, such as was voiced by Fed Chairman Jerome Powell: "One of the arguments that are offered in favor of a digital currency, in particular, you wouldn't need stablecoins, you wouldn't need cryptocurrencies if you had a digital US currency."

- Some want to increase the payment infrastructure's *resilience and efficiency* (e.g. by creating an offline variant of CBDC that can be used without electric power and without computer networks). This is particularly important in areas where there may be natural disasters and conflicts.

- Some hope to distribute *helicopter money* quicker and more directly to the population and to small businesses. The government subsidies need to reach those who need it most rapidly in times of crises, pandemics, conflicts (and not get stuck in the intermediate banks). However the currently envisaged 2-tier system, will again mean that intermediaries are in between the central bank and the users' wallets.

- Some want more efficient, cheaper, faster, more transparent *cross-border* payments (using a non-retail version of CBDC in the wholesale/inter-bank domain). This has the potential to also improve the 794bn$ remittance market. However, for that the 100 central banks across the world will need to agree on a common/interoperable way of implementing CBDC.

- Some want to introduce *coloured money* (sometimes called tagged money) to control use of money: Beneficiaries of social payments can spend the benefit support on food and clothing but the money will not 'work' at the off-licence or casino. Parents can use CBDC to preload a smartcard with pocket money for their children, which they can then use anywhere (even offline, without Wi-Fi, without a smartphone), at the same time limiting the number of energy drinks and sweets they can buy.

- Some want to reduce *fragmentation* (a strange goal, since we are adding yet another payment means, thus surely increasing fragmentation)

- Some want to add new levers to *monetary policy* (e.g. if one can eliminates cash, one can *enforce negative interest rates*. In Japan, where there are negative interest rates, i.e. the money depreciates as it sits in a bank account, people currently "escape to cash": they take their savings out of the bank and instead put bundles of notes in a safe or under their mattress. But if cash is abolished there is no escape. Not a problem for Turkey at the moment, but something for everyone to keep an eye on.)

- Finally, one of the most frequent reasons cited is to increase *sovereignty* and retain the *monetary anchor*. This last goal is likely driven by the shock caused to the financial system by Facebook's attempt to introduce Libra as a new global digital currency. However, Libra has since failed and future threats to fiat money by Crypto

are surely best combatted by regulation (such as Europe's MiCa, Turkey's regulation of 30th April 2021, etc) not by introducing another state currency.

In summary, there is a wide catalogue of more than a dozen reasons – not all of them very convincing - why central banks are currently planning to introduce CBDC. Some indeed speak of "Central Bank FOMO" – that each central bank is only doing it because the other central banks are doing it, and don't want to miss out.

But assuming that we do want to achieve some of the benefits of CBDC, it is not enough just for the central banks to think this is a good idea. For CBDC to become a success, *all* stakeholders need to engage. It must also be of benefit to citizens, consumers, businesses, corporates, retailers, merchants, commercial banks and others in the payment ecosystem. Otherwise there just will not be any adoption.

With this in mind, the next blog will look at the wider stakeholder ecosystem to see what the opportunities and concerns of the other actors beyond the central banks might be.

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Do we really need another lira, dollar, euro, pound or yuan? A critical reflection on CBDC – Part 2

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Introduction

This blog is in three parts. In the first part (link), we reviewed what CBDC is, who is driving this development, what *central banks* are trying to solve and what the current state of play is. In this second blog we will now discuss the topic from the point of view of the *other stakeholders* in the ecosystem (notably end customers, merchants and banks). We will see some of the concerns that have legitimately been raised – whether the original goals are achievable at all, and that there is a real danger that this whole development may be a big global "flop". In the final blog we will then look at the advantages to all and why it may be worth all of us working together to make this new money a reality.

Motivations of other stakeholders

End users

As we have seen above, it will be hard to convince normal end-users to adopt CBDC: we already have very well functioning money and payments. One can already move money around digitally very well.
Most people don't even see the difference between a debit and a credit card – how can they be expected to understand the difference between commercial bank money and central bank money ? One could hide the difference (for payment geeks: the CBDC "waterfall" method) – but then what is the point of having a different kind of money at all ?
The consumer angle does not really seem to have been thought through.

For CBDC to be successful it must have *at least* the same functionality as paper cash (anonymous, simple P2P exchange, good control, safe store of value, immediate), in addition to having significant and clear *advantages* over existing paper cash (eg protection against loss and theft, a means to pay both physical and online merchants, a more

convenient user experience, cheaper/faster remittance payments to send salaries home to the family, connected to innovative FinTech-enabled services). Will CBDC be able to realise this ?

A special case is in countries with less stable currencies, where CBDC may be an attractive way to access the Dollar or the Euro remotely/electronically (if CBDC is accessible cross border). In Argentina, for example, people have been moving away from the Peso (which lost almost all its value in a generation) to crypto. In the words of one commentator: 'I would rather have a digital asset whose price goes up and down than a currency whose only real trend is down'. With the advent of cross-border CBDC, people in such countries will have access to stable currencies (dollar, euro, etc) and will not have to resort to unstable crypto. However national governments may not like this attrition of the national currency (see goal of monetary anchor above) and will thus likely fight against this[3].

So, in summary, the enthusiasm of the population to adopt CBDC will surely be limited. So how will the governments and central banks aim to convince the populace ? One area *not* to get answers from is by asking the consumer (the ECB tried this and got very bizarre results). Apple and Sony famously did not ask customers if they wanted an iPod or Walkman. As advertising guru David Ogilvy famously said 'Consumers don't think how they feel. They don't say what they think and they don't do what they say'.

Maybe the next stakeholder to be examined below may be more helpful …

Merchants

There are many potential incentives for merchants to adopt CBDC:

- Lower cost: cost of acceptance should be lower than cards
- Better liquidity: funds are available immediately, especially in markets where Instant is not yet the norm
- Fewer abandonments: FinTech enabled services will provide a better UX
- Reduced cost of cash handling (since CBDC should reduce paper cash)
- New services, e.g. per-use micropayments
- Better acceptance: if cross-border CBDC is realised and merchants can take payments from customers from all countries
- Businesses improving global treasury management through international harmonisation
- Better protection against theft, fire and disasters – unlike banknotes
- etc

Thus merchants may well be motivated to invest and ensure that CBDC is accepted at their points of sale online and in physical shops. Indeed merchants may end up driving consumer demand. Merchants have shown they can be rather successful at steering consumers (for example, by putting their preferred payments at the top of the list, offering rebates

[3] See, for example, Cambodia. Here, the US dollar was increasingly being used instead of the local riel. The local CBDC-like instrument "Bakong" was thus introduced to help strengthen the local riel and reduce dependence on the foreign dollar. Bakong's many benefits (better remittance, lower fees, more inclusion, better usability, etc) convinced many to eschew foreign currencies, crypto, etc and return to the local monetary anchor. In this case CBDC actually helped to stabilise the local monetary anchor and increase sovereignty of the national currency.

to nudge their clients towards specific instruments, etc), so maybe this will indeed be the driving force for consumer CBDC adoption.

If that does not work, the ECB has already said that they believe CBDC should be legal tender[4] i.e. *must* be accepted everywhere and thus at every merchant.

Commercial banks

For the normal high street bank, the case for CBDC is not good:

- The central banks will force them into taking on the expensive distribution task: creating and managing wallets, distributing them to their customers, doing KYC to protect against misuse/AML/ATF, answering hotlines with customer queries, etc.
- Commercial banks will not be able to charge more for CBDC than they currently charge for cash (typically nothing in the case of consumers).
- As more of their customers' money moves into CBDC, commercial banks will have less deposits in their balance sheets, thus impacting their core business of lending. (One estimate has suggested that US banks would have US$4bn less liquidity due to CBDC)
- If CBDC payments take a slice out of the cards business (as is the goal), this may seriously impact commercial banks' bottom line. (In the US, banks and other card companies earn US$160–US$180bn per year in interest, interchange and other fees through their cards business.)
- etc.

In the face of these costs, risks and threats, commercial banks are hardly likely to perform the critical role in distributing CBDCs for the central banks with enthusiasm. Thus, mechanisms for intrinsically motivating banks (the 'carrot') must urgently be sought. Simply forcing by regulation (the 'stick') — has proven not to be efficacious. For example, the European Open Banking regulation, the Revised Payment Services Directive (PSD2) forced banks to open up and expose their crown jewels — their customer data — to competitors and to allow competitors to initiate payments over the banking rails — all for free. This was understandably met with a lack of enthusiasm by banks. They often adhered to the letter of the law (compliance) but not to the spirit of the law (making open banking actually work well for the benefit of all). Only after many years and pointing out that open banking can actually be a huge benefit to banks themselves, did the industry move more voluntarily, and a huge FinTech scene that collaborates with banks emerged. This mistake must not be repeated. Banks should be intrinsically motivated that CBDC is — despite the immediate disadvantages — also in their interests.

On the upside, it is clearly in the commercial banks' interest to defend their national systems, their national economy against foreign big techs (PayPal, Facebook, etc), Crypto (without central parties, without banks, but now used as the main off-ramp by hackers and scammers) and foreign governments (Dollar, Yuan, etc) seeking to challenge and threaten their core existence. It should thus be urgently in the banks' interests to support a CBDC which has a banking system and national sovereignty at the heart of its policy agenda.

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[4] ECB President Lagarde said "we should bear in mind that it is a constitutional feature of cash - as central bank money - to be legal tender … and it would be unprecedented to issue central bank money for retail payments without legal tender status - just because it circulates electronically"

Another incentive comes from the inordinate cost of cash distribution, which largely falls to the private sector (cash logistics, ATMs, etc — see above). Thus, again commercial banks should welcome an initiative to accelerate the reduction in physical cash and hence reduce costs to commercial banks.
In short, there are several macroeconomic, strategic reasons for banks to support CBDC, even though some microeconomic immediate risks and huge investments over decades are inevitable.

After this critical reflection, we will return in the third and final blog, to why maybe CBDCs should be embarked upon after all.

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Do we really need another lira, dollar, euro, pound or yuan? A critical reflection on CBDC – Part 3

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Introduction

This blog is in three parts. In the first part (link), we reviewed what CBDC is, who is driving this development, what *central banks* are trying to solve and what the current state of play is. In the second blog (link) we discussed the topic from the point of view of the *other stakeholders* in the ecosystem (notably end customers, merchants and banks). We saw some of the concerns that have legitimately been raised – whether the original goals are achievable at all, and that there is a real danger that this whole development may be a big global "flop". In this final blog we will now look at the advantages to all and why it may actually be worth all of us working together to make this new money a reality.

Should we be doing this at all?

All the critical considerations raised in the previous blogs leads to the the question whether we should all be embarking on the CBDC venture at all. It is likely to cost "as much as building Rome" - not once, but for each country - and will occupy executives, developers, consultants, marketeers for decades. There may be a feeling that the enormous time, costs and management attention needed to make CBDC happen could better be spent elsewhere. There is also the concern that CBDC represents yet another step in the state taking more control in areas where the private sector should act.

In an increasingly electronic payments world where money can already be moved efficiently and privately between bank accounts, phones, wallets, merchants and people, is there really any need for a new, state-driven digital cash?

Some say that the advantages envisaged could better be realised, also by the right actors, just by upgrading the existing infrastructure, by leveraging existing investments and improving them for the modern age. Others, however, fear that the legacy financial services ecosystem will not step up without a quantum shift initiated by regulatory intervention. The truth is, 'the search for such a [cheap, instant, universal and secure cross-border] solution is as old as international commerce'. Even within Europe (or even within single member states such as Germany), the payments industry has been working towards a harmonised P2P solution for a long time. We have been saying micropayments unlock totally

new markets forever. We have been saying that we must increase inclusion. These goals are being worked on — but not always at a hugely satisfying pace. Perhaps what is needed is a big bang — a regulatory push with the potential to make all these topics jump forward. As seen with Pix in Brazil, UPI in India, SEPA/Instant/PSD2 in Europe, if one wants to get large-scale progress in this complex, two-sided, network industry, the regulator needs to initiate the change. Hoping for the existing players to coordinate and raise large funds for the common good has proven to be difficult many times over. This is not due to ill-will or even incompetence; there are simple economic reasons for this: banks, as private economic actors, must put their own interests and those of their stakeholders at heart. Therefore it is sometimes necessary for all to be forced into a macroeconomic common good, when each actor alone does not have a sufficient microeconomic incentive. This is the 'tragedy of the commons'[5]. Thus, a regulator needs to act and the worldwide community of central banks is now stepping up in a global initiative. CBDC can now – maybe - move the needle on many points such as global harmonisation, inclusion, cash innovation, sovereignty, cost reduction, micropayments, etc.

As CBDC is inevitably coming, and has the potential to bring many important topics forward, it is essential to make the most of it.

Conclusion

We saw in the first blog that there are some good reasons, especially for policy makers, for the introduction of CBDC — however the second blog pointed out that the entire value chain must be engaged and the motivations for consumers, businesses and commercial banks, are much less clear. In any case, there are serious questions, risks and costs (also opportunity costs) that must be balanced against the gains.

We know from experience that *everything* must be got right in this complex, multi-dimensional topic of payments (it is no good getting everything right but not privacy; it is no good getting everything right and not motivating a critical stakeholder; it is no good if everything is right but someone has no business case). This may all seem rather obvious, but many payment initiatives have failed because one such dimension was not thought through.

Central banks cannot allow CBDC to become too big, otherwise it may crowd out private solutions, seriously impact banks' balance sheets etc. At same time, however, CBDC must also not become too small or even fail (after the gigantic investments to be made), and this is a true danger if banks are not intrinsically motivated, if merchants and FinTechs find no economic incentive, if consumers do not see a convincing narrative, have surveillance concerns or prefer to put their money in interest-bearing commercial bank accounts rather than zero-interest central bank money.

Interestingly, it is hardly ever the technical dimension that causes new payment initiatives to fail — although most pilots and studies and discussions insist on examining (only) this dimension. It is far more important to focus on whether something really solves a problem, and that all stakeholders are intrinsically motivated. The technologists will work out a good way of making it work at scale later; that is not the critical issue. Any reasonable set of policy objectives can be implemented at scale — the industry has decades of experience in this respect.

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[5] 'a social and political problem in which each individual actor is incentivised to behave in a way [eg by not doing anything] that will ultimately be harmful to all'



Pieces of Eight – the world's most successful global money
Image Source: Pirates of the Caribbean

CBDC — The modern pieces of eight?

As a vision for the future, this paper proposes the creation of 'pieces of eight' for the modern era. The 'peso de ocho reales' were the world's first and most successful global currency. They were used not only across the then world-dominating Spanish empire, which stretched from South America to the Philippines, but also spread across Asia, Europe, Africa and the Americas. They were hugely successful and minted by the billions. They were "the Visa and Mastercard of the 16th through to the 19th centuries". They were even legal tender in the USA until 1857.

The modern pieces of eight — CBDCs — will not be issued by a central dominant force (neither the Spanish Empire, nor China, nor Facebook) but by all the central banks across the world together. Not as physical metal coins but as a modern, electronic form of cash — with the right balance of privacy, massive innovation, fewer crypto scams, cheaper payments, better inclusion and huge advantages to governments, central banks, commercial banks, end users and businesses alike.

Let us make this vision a reality.

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