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CENTRAL BANK OF THE FUTURE

Central Banks as Utilities?
(Summary of Private Roundtable Discussion)

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Abstract

In June 2020, the University of Michigan Center on Finance, Law & Policy held a virtual Roundtable for the Central Bank of the Future Project. This event explored whether central banks could provide services in the following areas: real time payments, account provisioning for individuals, data collection or regulation, and identification systems. This paper distills the discussion of the Roundtable into a summary of relevant considerations for central banks regarding their role in financial inclusion. The Roundtable attendees participated in the conversation under Chatham House Rule. Therefore, the ideas presented in this paper are not attributed or attributable to any one participant. These ideas also are not necessarily reflective of the opinion of the participants or authors and are certainly not an exhaustive exploration of the topics at hand. The authors have synthesized and reordered the discussion to effectively convey the thoughts and ideas presented at the Roundtable.

The Potential for Central Banks to Serve as Utilities

Central banks are already, in some ways, utility providers. Certainly, central banks play a dominant role in facilitating public goods. Admittedly, from a historical perspective, central banks were not always seen as entities designed to serve the public. While some may understand the role of central banks to be protecting consumers, central banks actually began as entities to serve banks, ensuring they survive through financial crises. Central banks can now be understood not solely as public or private entities, but as publicly chartered, private institutions. However, the original *intent* of central banks should not be solely dispositive about the role of the "central bank of the future." The future of central banks can be different from the original purpose of central banking.

Current financial systems around the world show promise in the ability of central banks to eventually serve as utilities, though there are some barriers. Singapore's central bank, the Monetary Authority of Singapore (MAS), is the dominant player in facilitating public goods, playing a huge role in the governing of data so that it enables innovation in financial services. In India, the current national payment system is a non-profit platform provided by banks and regulated by the Reserve Bank of India (RBI). In this case, if the RBI wanted to directly provide the service, it would require an entirely new platform and financial and legal infrastructure. Therefore, a public private partnership makes sense, especially where government resources may be constrained. While financial innovation and technology provide an opportunity for central banks to serve as utilities, countries may be constrained by their ability to integrate those technologies into their central authorities quickly and effectively. They also may be constrained by economic and human capital resources.

However, this discussion of the potential for central banks to serve as utilities may be overlooking an important aspect. The inquiry "*how* should the central bank do

this?" leapfrogs the question of "*if* central banks should serve as utilities?" If the goal of this type of utility is to promote public policy, central banks may not be the correct institution to spearhead this project. Rather, the question ought to be "*what* should the central bank do?" This allows the discussion to include an evaluation of the feasibility of the central bank in various non-ownership roles, such as facilitator, governance agent, or regulator. Maybe the best solution will mirror India's partnership system. But importantly, this adjusted question recognizes that the answer could be simple: that central banks should do nothing.

The Roundtable explored the role of the central bank in serving as a utility to facilitate payments and account provisioning, govern data, and establish digital identities. The following sections of this paper explore the capacity of central banks to engage in these services, potential barriers to central bank involvement, and foreseeable benefits or problems with such a system.

Social and Technical Considerations for Implementation

Centralizing information increases a number of risks including, but not limited to, cyber security and corruption. The goal of the central bank of the future would be to better foster financial inclusion, providing services to unbanked populations. However, central banks are not usually replete with technological excellence, risk management, or a consumer focus. Financial technology must be trusted and scalable to ensure that centralization would not threaten the sensitive information of citizens and consumers. Actions by central banks have also, at times, been adverse to financial inclusion due to their overfocusing on financial stability. Additionally, regarding corruption, central banks may take actions that are hostile to privacy or personal safety, notably in countries that are led by authoritarian governments.

A. Payments and Account Provisioning

A one-size-fits-all approach to central banks as utilities is not viable because each central bank operates in distinct legal and financial environments. Therefore, whether central banks should perform activities such as account provisioning through tokenization or by creating a digital currency should be assessed on a country-by-country basis.

There are several benefits to central banks performing account provisioning, such as reducing counterparty risk by controlling settlements, reducing financial system friction, preventing illicit use bank accounts by using national identification systems, and allowing for interoperability. Supporters of central banks in this role stress that everyone should have the option to choose whether they open an account with the central bank. Those who are not comfortable with an account managed by their central bank can opt to open an account with a commercial bank or financial technology organization instead.

Additional considerations include determining how accounts should be provisioned. Tokenization has gained popularity in payments over the years due to its ability to mask personal account numbers (PANs) and replace them with randomly generated token IDs. Whether account provisioning should be performed through tokenization continues to be a point of contention. While tokenization improves security and protection from fraud, it also gives account users varying levels of anonymity. Anonymity presents a policy problem because it makes tracking financial crimes more difficult.

B. Data

Data governance is a recurring topic among financial service professionals around the world as data has become an invaluable resource for both the public and private sectors. The policy questions about this topic include (although are not limited to) how data should be governed and who should govern it. What role, if any, should the central bank have in providing the solutions? Countries around the world are at different stages in answering this perennial question. Singapore, for example, provides a starting point for answering how central banks can participate in data governance.

Singapore has had success using a model that requires the MAS to maintain and publish the policy for data governance. Data is owned by different government agencies with the consent of the public, but the central bank hosts a platform, called MyInfo, that uses the data to create a digital profile. With this approach, the process of signing up and interacting with third parties is streamlined, while still giving consumers full control over who can access their information. If a third party misuses a customer's data in a way that was not authorized, then the owner of the data (the consumer) can take legal action against the third-party entity.

Although Singapore's model of digital profile and database has reached significant scale, it was slow to ramp up initially, as it was not widely used until MAS began exploring viable solutions to support its Know Your Customer (KYC) requirements. Once the central bank realized the value of this system and then published supporting regulation, users accessed the platform, and it became the robust and widespread database that it is today. Thus, central bank participation in data governance can be impactful.

A public entity may be the best choice to govern data, but another consideration is that central banks may not be the ideal entity to perform that duty. First, data is not limited to the financial services industry. Other industries, such as the healthcare sector, leverage data to inform decision-making, so a central bank may be incapable of covering the data needs of each industry. Second, it may not be ideal to have the ownership of a data repository be limited to one entity. It may be better to share it across many entities to spread accountability and, in the unfortunate event of bad actors, liability.

The culture around data ownership also needs to be taken into consideration when thinking about the central bank's role, as the apprehension around data usage varies by country. For example, in the United States, only recently has the way private organizations use their customers' data became a main topic of discussion. Even so, many U.S. consumers are prompted to consent to data sharing when engaging with third-party platforms and still quickly approve such uses without proper scrutiny of the consent agreement. This cultural trend does not provide clear support for or against central bank data governance. More importantly, citizens of different countries have differing levels of trust in their government to act in citizens' best interests. Where there is little trust in government, citizens will likely be loath to have the government house all of their information.

While the debate of how involved central banks should be in the governing and distribution of customer data continues, it is clear that public institutions have an important role to play.

C. Identity

The provision of identification is already a government function. IDs, drivers' licenses, passports, and more are all provided and tracked by government agencies to ensure that they can identify people interacting within their borders. Even the existence of a financial identity is not a new concept. It is the basis for credit records, developed by credit bureaus. Although these are not government agencies, they are regulated in the United States by the Fair Credit Reporting Act of 1970. Another option for identification is digital identification systems, with the system in India being a current example. However, India's system is not directly provided by its central bank.

Comprehensive digital identification systems are important for two reasons: (1) financial inclusion and (2) combating money laundering and other illegal activity. However, central banks may not be the best actors to provide digital identification systems and services. First, identity, like data, is a necessity beyond the financial sector; it is not a banking-specific problem. Second, there are many obstacles—including the cost of developing this infrastructure, liability, privacy, and trust—that make providing a digital identity system a whole-of-government issue:

1. Cost

   Developing a digital identification system can be extremely costly. Central banks may not be able to take on the costly task of upending current infrastructure and integrating newly developing technologies. Financial services institutions, on the other hand, may be interested in paying for the costs of infrastructure, as it has huge benefits for them, including helping them meet Know Your Customer (KYC) requirements.

2. Liability

Deploying and utilizing a public utility requires some ownership of liability for the accuracy of the data. The United Kingdom had trouble with this. The UK's banking system assumed an identity system would include KYC procedures, but sources of the data were unwilling to guarantee that the data was valid. Ultimately, this made banks unwilling to adopt this system.

3. Privacy

   The desire for privacy and country-specific privacy laws are significant barriers to expanding government-led digital identity systems, especially to the extent that such a system allows extensive digital activity by the government. In the UK, for example, there was resistance to such a system due to fears of government surveillance and privacy violations.[1] India's digital identification system, for instance, has biometric information embedded. In many countries this also would prompt privacy concerns.

4. Trust

   A centralized identification system requires that people trust central banks with their identification information. The central bank and its respective government must be understood as a benevolent actor that will always prioritize its people's desires and best interests. In countries where there is a risk of surveillance being used to restrict freedoms, this expansion of surveillance would be particularly worrisome.

Policy Options and Ramifications for Central Banks of the Future

A. Payments and Account Provisioning

Central banks have the potential to improve financial inclusion through the provisioning of bank accounts. However, central banks are not capable of offering robust services to every person in a nation. They are not meant to be retail banking institutions and, so, are not expected to manage the investment of funds in individual accounts. Instead, central banks could operate as a back-end system, where everyone has an account provided by the central bank, but other service providers are responsible for operating that system – analogous to a Fed-API system.

Central banks can participate in payment systems and account provisioning by managing bank accounts for all citizens. Upon birth and generation of a government-administered ID, the central bank could automatically open an account for an individual. However, a decision would have to be made about who else can

[1] In 2019, the UK collected responses to a Digital Identity Call for Evidence. These responses indicated a common concern over user privacy. Since the Roundtable, the UK's Digital Identity Strategy Board has developed six principles to dictate digital identity policy in the UK, one of which is emphasis on privacy.

access these central bank-owned accounts, such as financial technology companies or other corporations.

There are four notable concerns with central bank account provisioning: financial inclusion, financial stability, security, and innovation:

1. Financial inclusion

   In terms of financial inclusion, the concern is that this model would create a multi-tiered banking system. Although universal bank accounts would be available, they may not be used universally. This is a problem also reflected in two-tier healthcare systems. Poor citizens use less beneficial public institutions, while rich citizens use the private system.

2. Financial Stability

   In terms of financial stability, the concern is that the creation of central bank accounts would result in citizens' moving their money away from private banks and, thus, out of the financial system. Especially in the instance of a financial crisis, people may be inclined to shift their money into their (theoretically more stable) central bank accounts. A crisis could then cause systemic collapse of private banks. However, this problem could be prevented by capping the amount of money allowed in these central bank accounts so there is still an incentive to engage in private banking.

3. Security

   In terms of security, there may be cybersecurity risks in a system that can automatically create accounts. The automatic creation of bank accounts presents a risk that the people who "own" the accounts ignore them, creating dormant accounts. If there are a litany of dormant accounts within the central bank, that may present an additional risk that central banks are not prepared to remedy. Central banks are not currently responsible for addressing illicit activity that could occur through dormant accounts, so the additional task would require adaptation by inexperienced institutions.

4. Innovation

   If the central bank became too large of a player in account provisioning, it may become more difficult over time for the bank to innovate. This could limit adaptability to changing consumer expectations. Central bank inaction may actually give way to greater innovation from private companies as the private sector tries to resolve current financial gaps or market failures.

B. Data

The main focuses of the discussion regarding a central bank data repository were data ownership and data portability. Data ownership varies by country. For example, in Australia, consumer data rights give ownership to the people. In the

United States, however, there needs to be more clarity regarding data ownership and portability. If a central bank is expected to collect and manage consumer data, this role must be carefully resolved by each country in relation to their current data governance system.

Currently, many different institutions own and store data that belongs to consumers; it is not centralized. There is some value to having a consistent way to access consumer data. Central banks acting as utilities may allow the government to govern data and to potentially treat data as a public resource. Viewing data as a public good could remove some of the costs of data management, since the burden of liability would be eliminated. In terms of data ownership, citizens could control the sharing/releasing of that data, though it is technically managed by the central bank. This would empower citizens by giving them greater control over their personal information.

C. Identity

It is clear that government-issued digital identities can be beneficial for financial inclusion and security. Yet it is less clear the extent to which central banks should be involved in the creation or facilitation of that system. There are benefits to central bank involvement: capability and adoption.

1. Capability

   Though central banks may not want to *provide* this service, central banks might be the most equipped, developed institutions to *spearhead* this project. It may be realistic and pragmatic to allow central banks to develop a digital identity because of their capability in the current financial system.

2. Adoption

   Central banks may be able to ensure the legitimacy and, in turn, the adoption of a new national identity system. Any digital identity system will be competing with currently established means of identification, such as IDs or drivers' licenses. If central banks used a new digital identity system exclusively, it could help shift consumers towards using that system.

   However, for central banks to use an identity system *exclusively*, it would need to be accessible, accurate, and comprehensive. Any government authority that does not focus on those three features will likely see problems from inception. Some of the problems mentioned above (under "Liability") exemplify how it may be difficult for a central bank, alone, to ensure that information is both accessible and accurate.

However, there are also concerns with central bank involvement in this system: security and political misuse.

1. Security

   The security concerns for all entities are significant when discussing the creation of digital identities, especially when those identities are housed in one centralized system or location. Any new identity system must be safer than what currently exists. Driver's license and social security numbers, for example, are for sale on the dark web. The next method of identification would need to be resilient to security breaches. Fortunately, technology is advancing to a point where privacy-enabled legal mechanisms for moving information are possible. If privacy is protected in data transmission, then security breaches pose less threat to consumers. However, these advancements are not yet available at a scale that can be applied universally. Additionally, other societal factors must be addressed before the government could integrate those technologies—like privacy and trust.

2. Political Misuse

   Government control of a digital identity system could become a tool to settle political scores or fulfill other government agendas. In the interest of citizens' rights, central banks should not be the sole providers or gatekeepers of an identification system.

Overall, central banks likely will have a role in the creation of a national identity but are unlikely be the main providers of that system.

Conclusion

The Central Bank of the Future Project intends to identify the potential for central banks around the world to act as utility providers for the citizens of their respective countries. The ideas presented in this Roundtable discussion suggest that central banks are capable of taking on some role but may not be the best institutions to do so, or at least not alone.