Detailed Report on Offline CBDC Technical Considerations

Personal Account by Olivier Atangana

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Author's Note

This report is a personal account of the presentation by Ben Dovey and Gary Munro, as interpreted and compiled by Olivier Atangana. It reflects my understanding and perspective on the topics discussed during the event.

1 Introduction

This detailed report covers the presentation by Ben Dovey, Adviser at BIS Innovation Hub-Nordic Centre, and Gary Munro, CTO at Consult Hyperion,

on "Offline CBDC Technical Considerations". The presentation was part of the conference "Securing the Future Monetary System Cybersecurity for Central Bank Digital Currencies" held in Basel, Switzerland.

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3 Context and Significance

3.1 Emergence of CBDCs

The presentation began with an overview of the evolving landscape of digital currencies, emphasizing the emerging trend of Central Bank Digital Currencies (CBDCs).

3.2 Importance of Offline Capabilities

The need for offline functionalities in CBDCs was underscored, highlighting its significance in ensuring resilience and accessibility in various transaction scenarios.

4 Technical Aspects of Offline CBDCs

4.1 Defining Offline Transactions

A comprehensive explanation was provided on what constitutes an offline transaction in the realm of CBDCs, differentiating it from traditional online transactions.

4.2 Challenges and Solutions

The presenters delved into the technical challenges inherent in enabling offline CBDC transactions. They explored potential solutions and technological innovations that could address these challenges.

4.3 Security and Risk Management

A significant portion of the presentation was dedicated to discussing the security implications of offline transactions. Strategies for managing and mitigating risks were thoroughly examined.

5 Central Bank Perspectives

5.1 Motivations for Adoption

The driving factors behind central banks' interest in integrating offline functionalities into CBDCs were explored. This included discussions on financial inclusion, security, and operational resilience.

5.2 Implementation Barriers

The presenters identified and discussed various barriers to implementing offline CBDC systems, including technical, regulatory, and infrastructural challenges.

6 Design Considerations

6.1 Architectural Requirements

Details were provided on the required security architecture for offline CBDCs, encompassing both hardware and software components to ensure transaction integrity and prevent fraud.

6.2 User-Centric Design

The importance of a user-centric approach in the design of offline CBDC systems was highlighted. This section emphasized the need for accessibility

and ease of use, ensuring inclusivity for all users.

7 Concluding Thoughts

7.1 Future Trends and Innovations

The presentation concluded with a forward-looking perspective, discussing upcoming trends and potential innovations in the offline CBDC space. The importance of adaptability to future technological advancements was emphasized.

7.2 Final Remarks

The presenters summarized their insights and encouraged ongoing research and collaboration in the field.

8 References

A list of references and recommended readings on offline CBDCs was provided for further exploration of the topic.