Improving Cooperation among Central Banks in terms of Digital Currencies: Challenges and Prospects for OIC Member Countries

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"Improving Cooperation among Central Banks in terms of Digital Currencies: Challenges and Prospects for OIC Member Countries" (2nd Session - Final Draft of Research Report and Policy Recommendations)

Conclusion and Policy Recommendations at a Glance

- a comprehensive strategy for transition at the national level,
- raising public awareness and educational campaigns
- technological capacity build up, technical and physical infrastructure
- user-friendliness (i.e. downloadable apps in smartphones etc.) along with the security assurances
- meeting higher demand for digitally enabling devices such as smart phones, and computers / require governments' involvement in mitigating the costs in lower-income countries
- privacy concerns along with the security of the total system should be met by the central banks, in particular when cross-border transactions take place.
- banking supervisory institutions and other financial/capital market regulatory institutions must collaborate with central banks
- inter-governmental sharing of biometric information might become another sensitive issue in that regard

Policy Formulation Guidelines

- *Use well-tested protocols with provable security guarantees:* critical to utilize proven consensus protocols and cryptographic primitives to ensure robust cybersecurity protections
- *Leverage existing risk management frameworks and regulations*: Policy-makers and regulators should assess which areas of the CBDC ecosystem are covered by current laws and regulations and determine if novel statutes or technical frameworks are necessary for adequate protection
- *Conduct extensive testing and security audits:* Governments should have full access to and oversee security testing and audits for all CBDC implementation instances. Open-source code bases can facilitate more participation in the security testing process
- *Establish clear accountability rules and policies*: The overall framework governing CBDCs should define accountability for errors, breaches, and their consequences. For CBDCs using distributed ledger technology, accountability requirements among validators on the blockchain should be clearly established
- *Promote interoperability*: CBDCs should be designed to be interoperable with relevant financial infrastructure to increase the resiliency of existing financial systems. International coordination on regulation and standard setting is crucial for global interoperability.
- *Streamline and deconflict regulations*: Policy-makers and regulators should assess existing regulations and determine if any overlap or unnecessarily complicate CBDC implementation. Streamlining and deconflicting regulations can provide adequate protection.
- *Balance privacy and compliance*: System designs should aim to achieve reasonable levels of payment privacy for users while enabling regulatory authorities to enforce compliance rules. Recent research advancements indicate that privacy and compliance can coexist.

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#1	**Identifying the Objectives and Use Cases for CBDCs in Consultation with a Wide Range of Relevant Stakeholders (government bodies, financial institutions etc.) to Ensure Enhancement of Payment Systems, Increase Financial Inclusion and Improve Monetary Policy Transmission**	Start developing Central Bank digital Currencies (CBDCs) with a clear vision and objectives to meet needs, to achieve with CBDC, e.g. improving financial inclusion or payment systems. Clearly defining objectives and use cases (such as retail payments, wholesale settlements, cross-border transactions, or government disbursements) critical because it lays the foundation for the entire CBDC projects. Without a clear understanding of what to achieve and the use of CBDC, challenging to make informed decisions about its design, technical requirements, and supporting infrastructure. Additionally, well-defined objectives help communicate the benefits of CBDC adoption to the public and relevant stakeholders, fostering support and collaboration

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#2	**Developing Legal Framework and Regulatory Compliance / Regulatory Approval and Oversight for Ensuring Legal Clarity, Risk Mitigation, Consumer Protection and Central Bank's Role**	Develop a comprehensive and robust regulatory framework addressing legal, financial, and security aspects and specific characteristics of CBDCs, ensuring compliance with existing laws and regulations. The legal framework and regulatory compliance essential in terms of legal clarity, risk mitigation, consumer protection and Central Bank's role. Seeking regulatory approvals ensures the CBDC operating within the legal framework, preventing potential regulatory hurdles or legal challenges after launch. Regulatory compliance is an ongoing responsibility. Financial and legal standards can change due to evolving technologies and emerging risks. Maintaining regulatory oversight ensures the CBDC operating within the boundaries of the law, remaining secure for users

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#3	**Setting-up a Dedicated Task Force including Central Bank Specialists to Identify the Pertinent Technology Stack for the CBDCs for Providing Security and Efficiency**	Implement secure and scalable technologies such as block chain, which ensure the integrity, confidentiality and efficiency of CBDC transactions. Choice of the appropriate technology stack for the CBDC, considering factors such as block chain, distributed ledger technology (DLT), or centralized databases crucial as it affects the CBDC's technical capabilities, security, and efficiency. Whether to use block chain or another technology depends on the desired level of decentralization and the specific use cases of the CBDC. Establish a dedicated task force consisting of qualified experts to elaborate on the subject

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#4	**Designing and Developing of CBDCs with Extensive Testing and Pilot Studies by Central Banks in Consultation with Technology Experts**	Create CBDC systems adaptable to future technological developments and changing economic conditions. Collaboration with technology experts ensures the CBDC infrastructure is robust, user-friendly, and secure. Intuitive and friendly interfaces for CBDC wallets and applications will encourage adoption among a wide range of users. Rigorous testing essential to identify and resolve any technical issues before the CBDC's launch. Comprehensive testing and pilot programs help identify and address any technical or operational issues early in the development process, improving the overall functionality and reliability of the CBDC system

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#5	**Developing Policies/Strategies/Programs for Ensuring Security and Privacy in order to Protect User Data and Transactions, and to Balance Privacy and Legal Requirements**	Have strong security measures to protect user data and transactions, and balance privacy and legal requirements. Security is paramount in the world of digital currencies. Robust security measures protect the CBDC system from threats such as cyber threats and hacking attempts, bolster user confidence, and prevent unauthorized access to funds. Compliance with data protection regulations essential to respect user privacy

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#6	**Facilitating the Access of the Public to the CBDCs through User-Friendly Distribution Channels in Collaboration with Financial Institutions**	Integrating CBDCs with monetary policy fundamental for central banks, allows for achieving their economic objectives while leveraging the benefits of digital currency. Clear issuance and control rules necessary to maintain stability and public trust in the CBDCs. Establishing distribution channels and user-friendly wallets ensures that CBDCs are accessible to the public. Collaboration with financial institutions extends the reach of CBDC services, making them widely available

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#7	**Developing Online and in-Person Campaigns (i.e. Mobile Applications) to Public for Promoting User Capacities and Raising Awareness about CBDC Usage, Benefits, and Security**	CBDC a new and unfamiliar technology. Effective communication with the public about CBDCs and how they will work essential. Education campaigns vital to inform the public, businesses, universities and financial institutions etc. about the benefits of CBDCs, their safe use, best security practices and what precautions to take. Also raise awareness and build trust in the CBDC system, which contribute the successful adoption of CBDCs

Policy Advises in Detail

NO.	POLICY ADVICE	Rationale / Explanation
#8	**Developing/Improving Sound Monitoring and Maintenance Mechanisms for Gathering Insights about the CBDC's Performance**	The official launch of the CBDC a critical milestone, should be executed seamlessly to build trust among users and stakeholders. Ensuring all necessary infrastructure and support systems minimizes disruptions during the transition. Continuous monitoring and regular maintenance essential to uphold the CBDC's performance and security standards. Gathering feedback and iteratively improving CBDC based on user experiences crucial to its long-term success. By adapting to changing needs and addressing user concerns, increasing the adoption and utility of CBDC in the financial ecosystem, CBDC remains reliable and secure for users

Policy Advises in Detail

NO.	POLICY ADVICE	*Rationale / Explanation*
#9	**Promoting Cross-Border CBDC Utilization by Enhancing International Cooperation between Central Banks and International Organizations through Standards and Protocols**	Exploring cross-border opportunities and interoperability by entering into agreements with other countries to facilitate international use for enhancing the utility of CBDCs on a global scale. It facilitates international trade, remittances, and financial transactions, promoting economic cooperation between countries. Collaboration with other central banks and international organizations to create a standardized and interconnected ecosystem for CBDCs. International standards and protocols promote trust and interoperability, allowing CBDCs to function seamlessly across borders. The OIC / COMCEC Central Banks Forum provides a regular platform for the relevant authorities of the Member Countries

Policy Recommendations for the OIC Countries Based on Case Study Findings

- **Common Policy Recommendations**
  - **Develop/Harmonize a CBDC Framework**
    - Promote a uniform standard for CBDC issuance
    - Collaborate with international initiatives like BIS
    - Draw insights from successful implementations like the Digital Rupiah in Indonesia
    - Infrastructure and Technical Development
  - **Prioritize digital infrastructure investment, ensuring high-speed internet access and reliable mobile networks**
    - Establish a specialized technical team or high-level team to create a comprehensive framework for CBDC
    - Regulatory Framework and Cybersecurity
  - **Craft a specific regulatory architecture for cross-border CBDC transactions**
    - Focus on cybersecurity measures, including sharing details on cyber threats and emphasizing cybersecurity education
    - Introduce robust measures to protect digital assets and user data associated with CBDCs
    - Cross-Border Collaboration and Integration

Policy Recommendations for the OIC Countries Based on Case Study Findings

- **Common Policy Recommendations**
  - **Prioritize cross-border integration of blockchain infrastructure**
    - Encourage cross-border collaboration and establish systems like OIC currency-conversion projects
    - Create forums or platforms to facilitate knowledge sharing and collaboration
 - **Promote Financial Ecosystem Development**
    - Encourage fintech ecosystem development, supporting fintech startups and innovation hubs
    - Boost digital literacy initiatives and focus on cultivating local expertise
  - **Focus on Trade and Monetary Implications**
    - Adopt or promote CBDC designs that support streamlined cross-border trade
    - Consider monetary policy implications and the potential impacts on financial stability and exchange rate regimes

Policy Recommendations for the OIC Countries Based on Case Study Findings

- **Additional Recommendations**
  - **Incorporate Dispute Management Mechanisms**
    - Integrate automated dispute resolution mechanisms
    - Use smart contract protocols on the blockchain to manage disputes
  - **Prioritize Sharī'ah-Compliance in CBDC Design**
    - Ensure designs address prohibitions in Islamic finance
    - Use experiences like eNaira to align CBDCs with rules on ribā and gharar
  - **Sustainability in CBDC Design**
    - Prioritize green technology to reduce carbon emissions and energy consumption during CBDC development
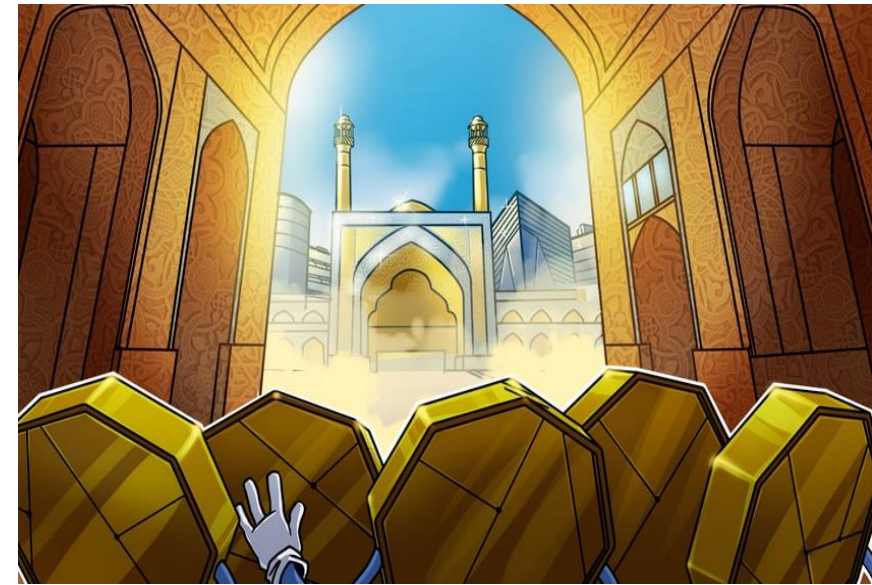
Overall Policy Recommendations for the OIC Members on the CBDCs

- **Pre-adoption Assessment and Planning**
  - Before developing or adopting a Central Bank Digital Currency (CBDC), OIC countries should undertake a comprehensive assessment of their specific needs and objectives. Examine existing digital financial infrastructure, potential barriers to adoption, and the overarching goals to achieve with a CBDC. Workshops, stakeholder consultations, and expert panels can provide in-depth insights to guide this preliminary phase

- **Encourage Public-Private Collaboration**
  - The complexity of developing and implementing a CBDC necessitates a collaborative approach. By involving both the public and private sectors, OIC countries can harness the innovation and agility of the private sector while ensuring that public sector concerns, such as security, regulatory compliance, and macroeconomic stability, are addressed. Collaborative task forces or working groups can be formed to foster this synergy

- **Prioritize Interoperability**
  - Given the interconnected nature of global economies and the significant cross-border trade many OIC countries engage in, any CBDC design should have interoperability in mind. So that OIC members' CBDCs can seamlessly interact with other digital currencies, payment systems, and even CBDCs from other nations

- **Adopt Proactive National Policies Aligned with Global Trends**
  - To successfully experiment with and implement CBDCs, OIC countries should have robust national policies aligning with emerging global digital finance trends. Being proactive can place these countries at the forefront of digital currency innovation, allowing them to shape and influence global standards

Overall Policy Recommendations for the OIC Members on the CBDCs

- **Facilitate Cross-Border Interactions and Mediations**
  - Mass adoption of CBDCs in the OIC region requires mechanisms to facilitate interactions through intermediaries and across borders. This can be analogized to the way trade agreements function. Regional collaborations or alliances might be established to streamline this process, ensuring that CBDC transactions are smooth across different jurisdictions

- **Commit to Ongoing Research and Development**
  - Continuous research, development, and optimization are paramount for the CBDC framework and its digital infrastructure. OIC countries should set up research centers or think tanks to keep abreast of technological advancements and best practices

- **Engage in International Regulatory Coordination**
  - The far-reaching impacts of CBDC adoption necessitate a coordinated international approach. OIC countries should actively participate in, or even spearhead, international discussions to develop unified regulatory standards, ensuring that the CBDC ecosystem is both robust and harmonized across borders

- **Address Infrastructure and Literacy Before Introduction**
  - Successful rollout of CBDCs not just depend on the technology but also on the readiness of the populace and the underlying infrastructure. OIC countries should invest in communication networks, widespread internet access, and educational campaigns to enhance fintech literacy. This will ensure that the adoption of CBDCs is smooth and beneficial to the masses

Acknowledgement