Question: 12. TBD I M P O R T A N T How could a CBDC provide privacy to consumers without providing complete anonymity and facilitating illicit financial activity?

Return to CBDC Benefits, Risks, and Policy Considerations

Question

Return to Top

How could a CBDC provide privacy to consumers without providing complete anonymity and facilitating illicit financial activity?

Answer

Return to Top

See the answers to the section 45_privacy and to the answer to q04.

The simplest way to achieve this would rely on the existing intermediary financial institutions to continue to do what they already do in terms of Privacy, Natonal Security, and International Security BUT with the addition of the ability to use a real-time U.S. CBDC transfer mechanism instead of only the existing Automated Clearing House (ACH) Network.

In essence, it would mean adding a parallel transaction network to the ACH Network handling the real-time transactions requirements of the U.S. CBDC. This requires the:

- Development of a U.S. CBDC is probably based on Stablecoin Model.
- Use of an energy-efficient Consensus Algorithm
- Development of a bridge between the existing ACH Network and the new U.S. CBDC Network
- Development of a new standardized Application Programming Interface (API) to connect the outside world to the newly enhanced combined ACH Network and CBDC Network for the existing intermediaries to use for transfers

> **Note:** The API could be in the form of Web Services, Remote Procedure Calls (RPC), Common Object Request Broker Architecture (CORBA), Data Distribution Service (DDS) or other interprocess communication mechanisms defined using ISO/OMG Interface Definition Language (IDL), standardized Web Services Interface Language (WSDL), etc.

Figure 1 provides a very simplistic overview of how a Dual ACH/CBDC network might work. The intention is to build onto the existing financial system already in place but to allow an option to use a U.S. CBDC probably built as a Stablecoin. The Existing Intermediaries would still fulfill their existing roles while providing an option to use a CBDC network to transfer the money. The existing validation and verification for the number of transactions, the quantity of money transferred, and all of the checks for criminal activity and assurance for privacy would stay in place.

Figure 1: Theoretical Very Simplified Dual ACH-CBDC Network Concept.

Scenario	Step Number	Description
Current Process	**1**	The First End User (Person, Corporation, Institution, a Computer process, etc.) goes into an Existing Intermediary and wants to transfer money to a Second End User.
	2	The First Existing Intermediary uses the newly U.S. CBDC Application Programming Interface (API) to start the transaction. The First Existing Intermediary asks if the money is to be transferred immediately requiring U.S. CBDC or if it will just be done using U.S. Dollars.
	3	The FIrst End User responds that they will be using U.S. Dollars.
	4	A transaction is created that meets the requirements of the ACH is formulated.
	5	The ACH Transaction is placed onto the existing ACH Network and routed to the appropriate Second Existing Intermediary.
	6	The Second Existing Intermediary receives the transaction and waits for the transaction to settle (usually within 24 hours).
	7	The Second Existing Intermediary places the money designated in the transfer transaction to the Second End User's bank account (i.e., debit, credit, checking, savings, Credit Card account, etc.)
	8	The Second End User possesses the money.
Scenario	**Step Number**	**Description**
U.S. CBDC Process	**1**	The First End User (Person, Corporation, Institution, a Computer process, etc.) goes into an Existing Intermediary and wants to transfer money to a Second End User.
	2	The First Existing Intermediary uses the newly U.S. CBDC Application Programming Interface (API) to start the transaction. The First Existing Intermediary asks if the money is to be transferred immediately requiring U.S. CBDC or if it will just be done using U.S. Dollars.
	3	The First End User responds that they will be using U.S. CBDC.
	4	The First Existing Intermediary verifies that the First End User has the correct amount of U.S. CBDC to complete the transaction. If Not, the First End User can convert some existing U.S. Dollars to U.S. CBDC to complete the transaction.
	5	A transaction is created that meets the requirements of the U.S. CBDC is formulated.
	6	The U.S. CBDC Transaction is placed onto the new U.S. CBDC Network and routed to the appropriate Second Existing Intermediary.

Scenario	Step Number	Description
	7	The Second Existing Intermediary receives the U.S. CBDC transaction after the transaction is been validated and verified by the U.S. CBDC Consensus Alorithm.
	8	The Second End User possesses the money.

Table 1: Various steps in using a simplistic theoretical dual ACH/CBDC network.

Examples

Return to Top

The “desirements” specified in White Paper and identified by the OMG's White Paper Analysis as **Privacy Issues** are listed in Table 2.

Table 2: Examples of **Privacy Desirements** identified during the White Paper Analysis conducted by the OMG

Category	Desirements
Benefits	B0004, B0022
Policies and Considerations	P0004
Risks	R0014
Design	D0012

Discussion of Examples

Return to Top

Table 3 provides discussion points for each of the “desirements” identified by the OMG's White Paper Analysis.

Table 3: Privacy references of desirements in the **White Paper**

Desirement No.	Desirement Text	Comment
B0003	**1**	Complement, rather than replace, current forms of money and methods for providing financial services
B0004	**2**	Protect consumer privacy
B0005	**2**	Protect against criminal activity
B0007	**3**	Provide households and businesses a convenient and electronic form of central bank money with: 1. safety 2. liquidity

Desirement No.	Desirement Text	Comment
B0008	**3**	Provide entrepreneurs a platform on which to create new financial products and services
B0009	**3**	Provide faster and cheaper payments (including cross-border payments)
B0011	**7**	Make payments: 1. faster 2. cheaper 3. more convenient 4. more accessible
B0012	**7**	Provide payment services to households and businesses around the clock, every day of the year
B0013	**7**	Provide immediate access to transferred funds
B0022	**13**	Provide a CBDC that is: 1. Privacy-Protected 2. Intermediated 3. Widely Transferable 4. Identity-Verified
B0024	**14**	Provide transactions finalized and completed in real time
B0026	**14**	Provide a bridge between legacy and new payment services
B0027	**14**	Maintain the centrality of safe and trusted central bank money
B0037	**15**	Support private-sector innovation
B0038	**15**	Allow private-sector innovators to focus on: 1. new access services 2. distribution methods 3. related service offerings
B0045	**16**	Enable rapid and cost-effective payment of taxes
B0046	**16**	Enable rapid and cost-effective delivery of: 1. wages, 2. tax refunds 3. other federal payments
B0047	**16**	Lower transaction costs

Desirement No.	Desirement Text	Comment
B0051	**19**	Generate data about users' financial transactions similar to the current Commercial Bank[1)] and nonbank_money
P0021	**13**	The intermediaries would operate in an open market for CBDC services
P0023	**14**	CBDC would need to be readily transferable between customers of different intermediaries
P0025	**14**	CBDC intermediary would need to verify the identity of a person accessing CBDC
P0026	**14**	CBDC transactions would need to be final and completed in real-time
P0028	**15**	Require significant international coordination to address issues such as: 1. common standards 2. infrastructure, 3. the types of intermediaries able to access any new infrastructure, 4. legal frameworks 5. preventing illicit transactions 6. the cost and timing of implementation
R0001	**3**	**Risk** of affecting financial-sector market structure
R0003	**3**	**Risk** to the safety and stability of the financial system
R0007	**8**	**Risk** CDBC is difficult to use without service providers
R0010	**11**	CBDC has **Risk** of significant energy footprint similar to Cryptocurrencies
R0011	**11**	Increased **Risk** to consumer's vulnerability to: 1. loss 2. theft 3. fraud
R0014	**13**	**Risk** of not achieving an appropriate balance between safeguarding the privacy rights of consumers and affording the transparency necessary to deter criminal activity
R0018	**17**	**Risk** a CBDC could fundamentally change the structure of the U.S. financial system, altering the private sector and central bank: 1. roles 2. responsibilities

Desirement No.	Desirement Text	Comment
R0019	**17**	**Risk** of reducing the aggregate amount of deposits in the banking system, which could in turn increase bank funding expenses, and reduce credit availability or raise credit costs for households and businesses.
R0020	**17**	**Risk** that interest-bearing CBDC could result in a shift away from other low-risk assets, such as shares in money market mutual funds, Treasury bills, and other short-term instruments.
D0012	**19**	**Design** should address privacy concerns by leveraging existing tools already in use by intermediaries
D0013	**19**	**Design** should facilitate compliance with a robust set of rules already intended to combat 1. money laundering 2. the financing of terrorism 3. customer due diligence 4. record-keeping 5. reporting requirements
D0014	**20**	**Design** should involve private-sector partners with established programs to help ensure compliance with existing rules
D0015	**20**	**Design** should include any dedicated infrastructure required to provide resilience to threats such as operational disruptions and cybersecurity risks

1)

Commercial banks include banks licensed either by federal or state banking agencies, credit unions, and thrifts from the **White Paper**.