

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?

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Question

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

Answer

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Note: See the answers to the sections:

- [45_privacy](#)
- [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](#), [National 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.

Scenario	Step Number	Description
	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.
	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

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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

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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	Complement, rather than replace, current forms of money and methods for providing financial services	
B0004	Protect consumer privacy	

Desirement No.	Desirement Text	Comment
B0005	Protect against criminal activity	
B0007	Provide households and businesses a convenient and electronic form of central bank money with: 1. safety 2. liquidity	
B0008	Provide entrepreneurs a platform on which to create new financial products and services	
B0009	Provide faster and cheaper payments (including cross-border payments)	
B0011	Make payments: 1. faster 2. cheaper 3. more convenient 4. more accessible	
B0012	Provide payment services to households and businesses around the clock, every day of the year	
B0013	Provide immediate access to transferred funds	
B0022	Provide a CBDC that is: 1. Privacy-Protected 2. Intermediated 3. Widely Transferable 4. Identity-Verified	
B0024	Provide transactions finalized and completed in real time	
B0026	Provide a bridge between legacy and new payment services	
B0027	Maintain the centrality of safe and trusted central bank money	
B0037	Support private-sector innovation	
B0038	Allow private-sector innovators to focus on: 1. new access services 2. distribution methods 3. related service offerings	
B0045	Enable rapid and cost-effective payment of taxes	

Desirement No.	Desirement Text	Comment
B0046	Enable rapid and cost-effective delivery of: 1. wages, 2. tax refunds 3. other federal payments	
B0047	Lower transaction costs	
B0051	Generate data about users' financial transactions similar to the current Commercial Bank ¹⁾ and nonbank_money	
P0021	The intermediaries would operate in an open market for CBDC services	
P0023	CBDC would need to be readily transferable between customers of different intermediaries	
P0025	CBDC intermediary would need to verify the identity of a person accessing CBDC	
P0026	CBDC transactions would need to be final and completed in real-time	
P0028	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	Risk of affecting financial-sector market structure	
R0003	Risk to the safety and stability of the financial system	
R0007	Risk CBDC is difficult to use without service providers	
R0010	CBDC has Risk of significant energy footprint similar to Cryptocurrencies	
R0011	Increased Risk to consumer's vulnerability to: 1. loss 2. theft 3. fraud	
R0014	Risk of not achieving an appropriate balance between safeguarding the privacy rights of consumers and affording the transparency necessary to deter criminal activity	

Desirement No.	Desirement Text	Comment
R0018	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	
R0019	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	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	Design should address privacy concerns by leveraging existing tools already in use by intermediaries	
D0013	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	Design should involve private-sector partners with established programs to help ensure compliance with existing rules	
D0015	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**.

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