

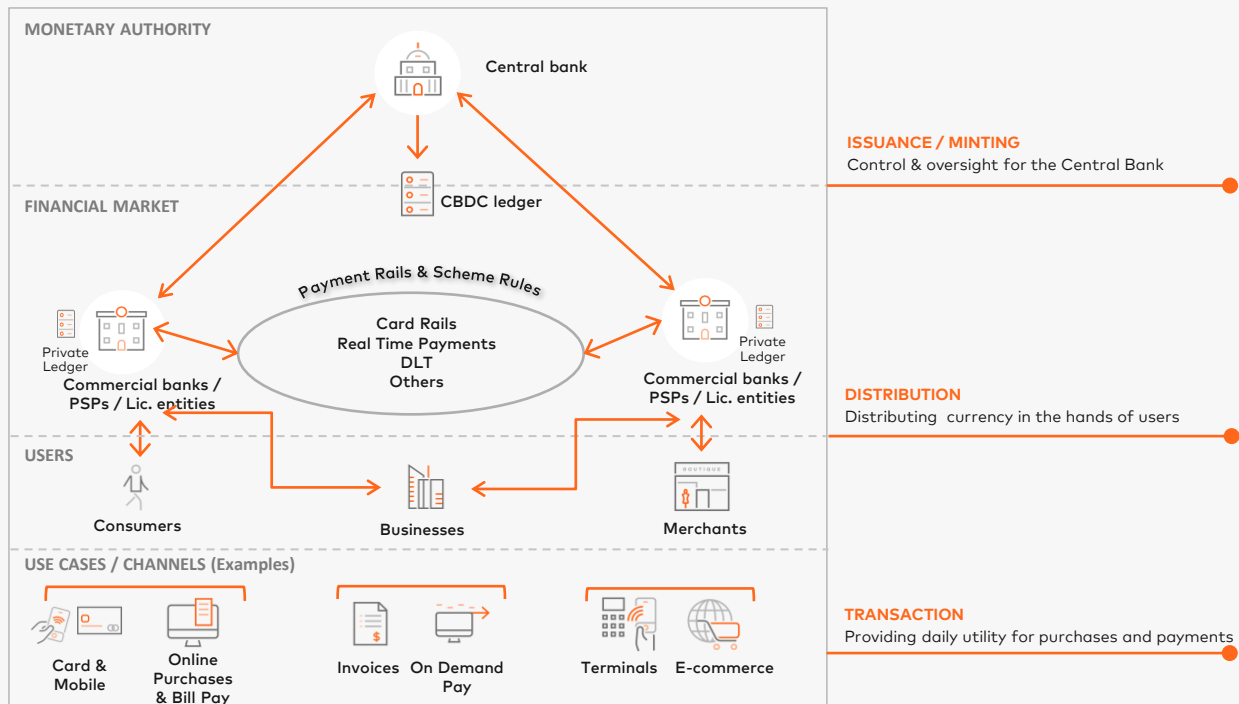


CBDC Virtual Test Environment



CBDC Modular Virtual Test Platform

Mastercard's virtual testing platform supports central banks in testing end to end CBDC designs to assess net benefits via use case simulation, all done within a controlled environment



Our CBDC testing platform allows Central Banks to test CBDC use cases in a controlled environment. The platform can support a breadth of features including programmable transactions, configurable data privacy & governance models, and blockchain-based CBDC management and monitoring.

- **Governance:** Simulate multi ledger hierarchy model with various levels of centralization and distribution
- **Franchise rules & standards:** Simulation of schemes rules and standards to test multiple conditions (e.g. exceptions, charge backs)
- **Regulatory AML and compliance:** Ability to simulate and validate AML and compliance conditions

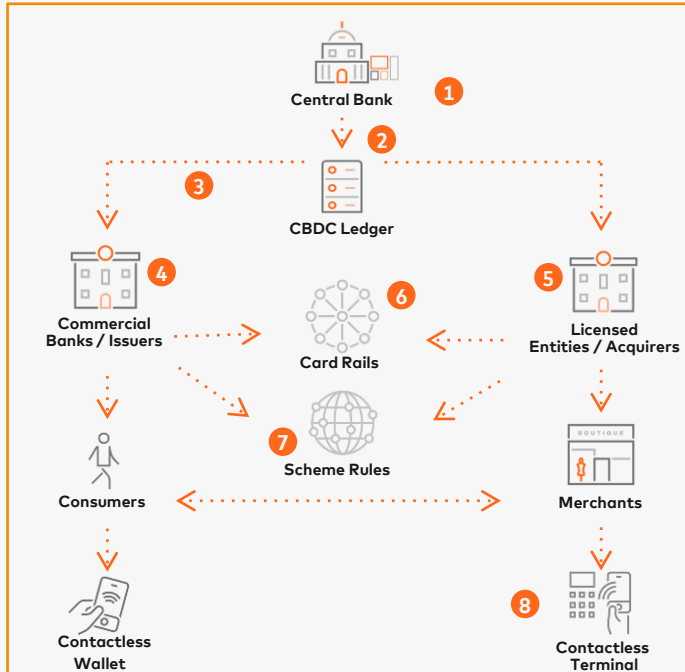
Sample Use Case 1: CBDC issuance, distribution and P2M transaction

Test Objectives:

Validate end to end CBDC issuance & distribution processes and enable CBDC retail purchases maximising use of existing POS card rails

Sample Testing Indicators – bespoke to each use case:

- Technology performance indicators (e.g. speed / throughput)
- Policy indicators (e.g. Central bank liquidity needs, Data privacy)
- Business indicators (e.g. validation of dispute resolution)



Design parameter	This use case	Alternative choices
1 Instrument Type	Account-based	Token-based
2 Basis of issuance	Exchange for central Bank reserves only	In exchange for collateral
3 Distribution	To licensed intermediaries (multi-tier)	Direct to individual wallets (Single tier)
4 Authorization	Existing Card rails	-
5 Settlement – intra-PSP	PSP Ledger	-
6 Settlement – inter-PSP	Existing Inter bank rails	CBDC ledger
7 Scheme rules	Existing scheme	New CBDC scheme
8 Payment initiation	Contactless card @ POS terminal	Multiple form factors New Scheme – to be determined