BIS

# Central bank digital currencies: an opportunity for the monetary system

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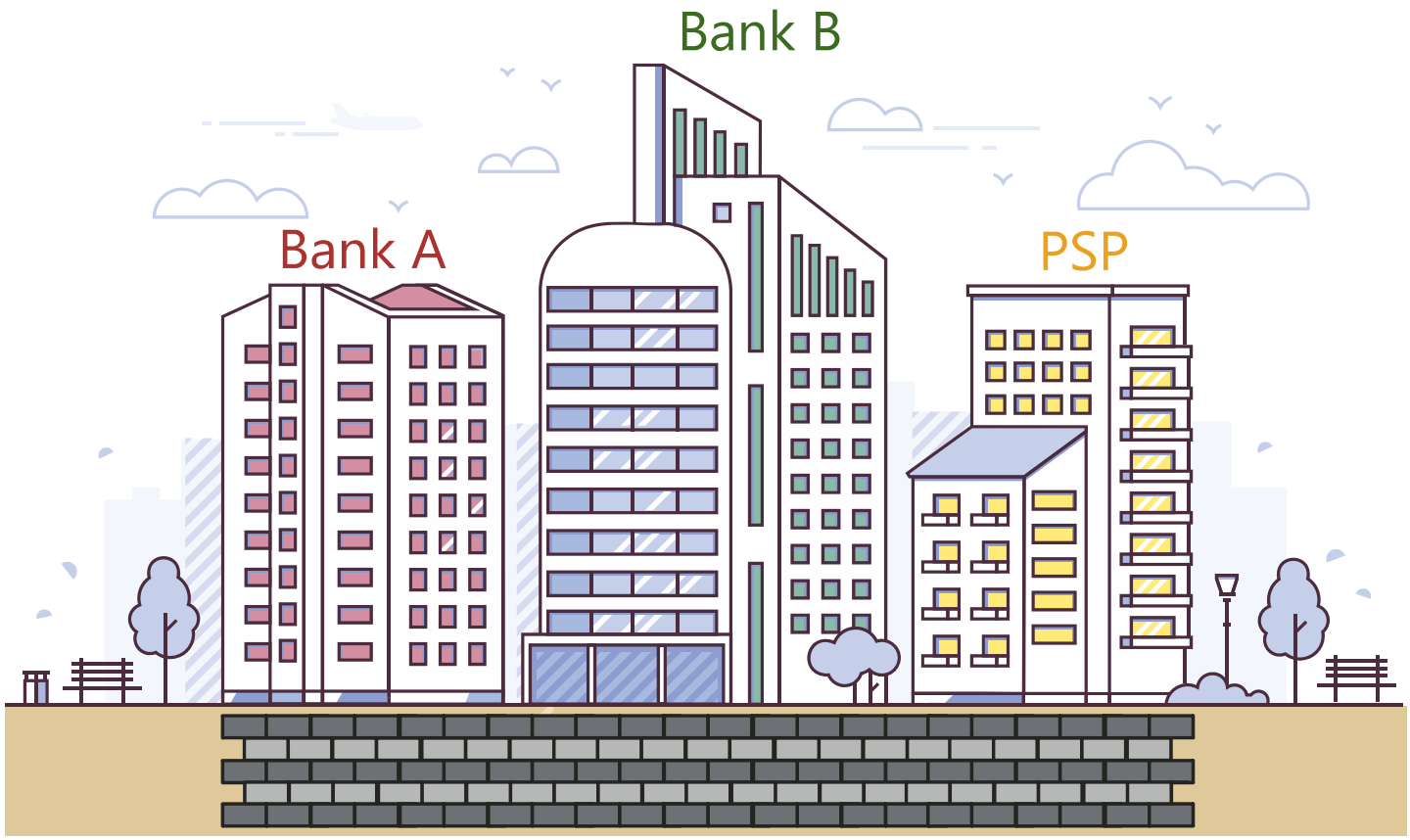
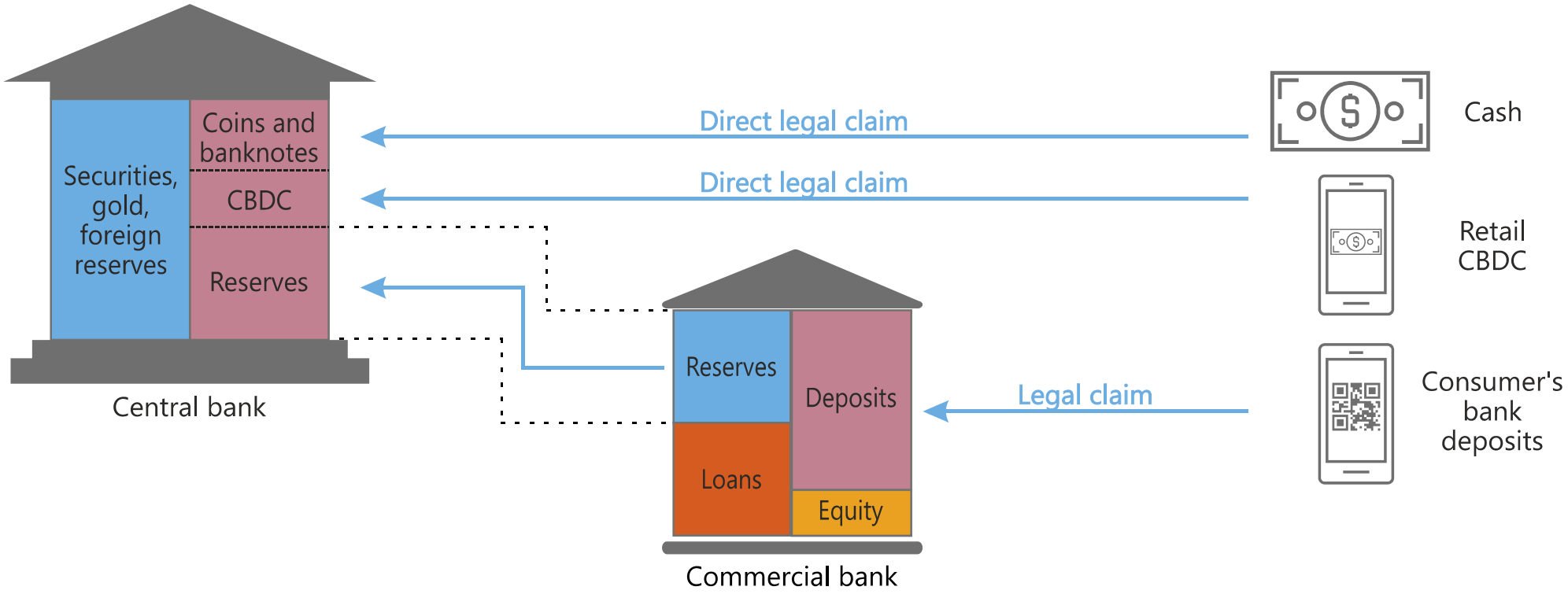
# CBDCs: putting a big idea into practice

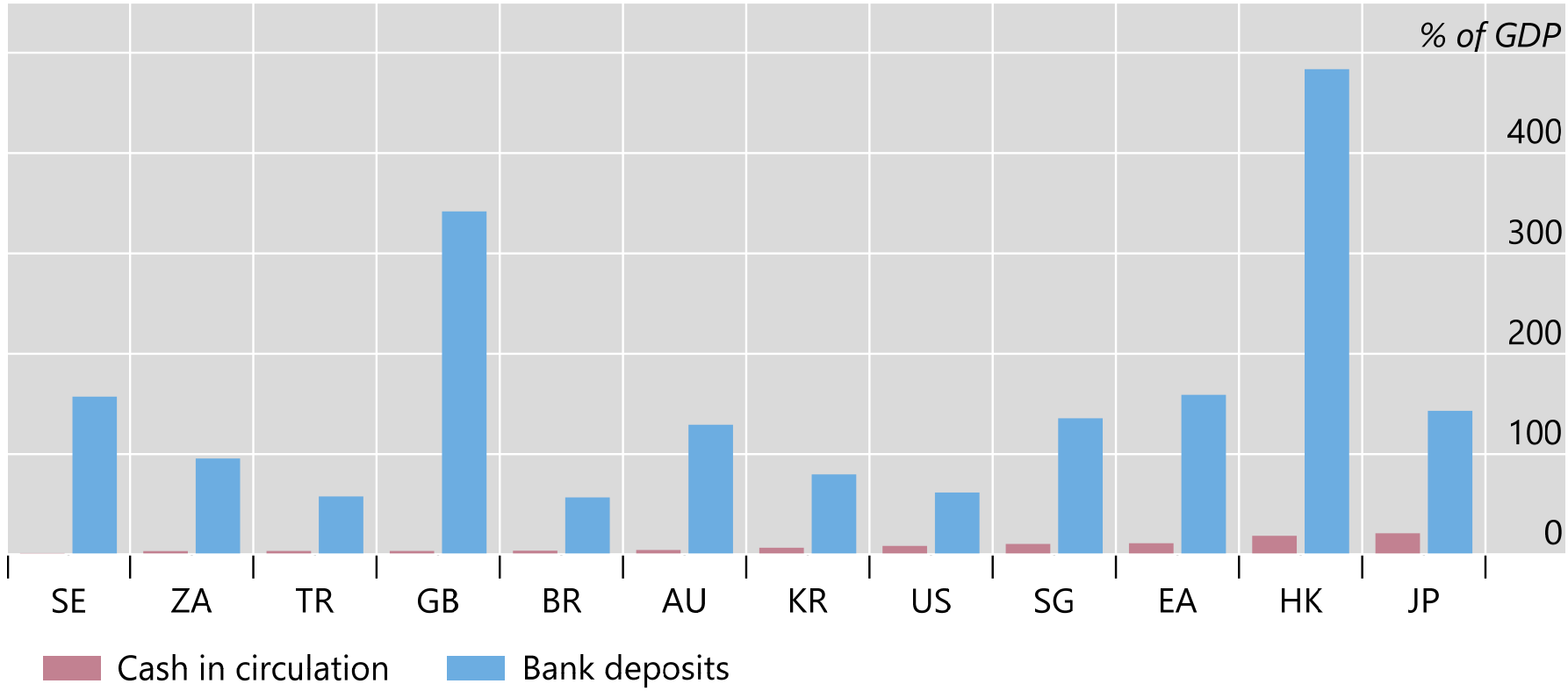



Central bank

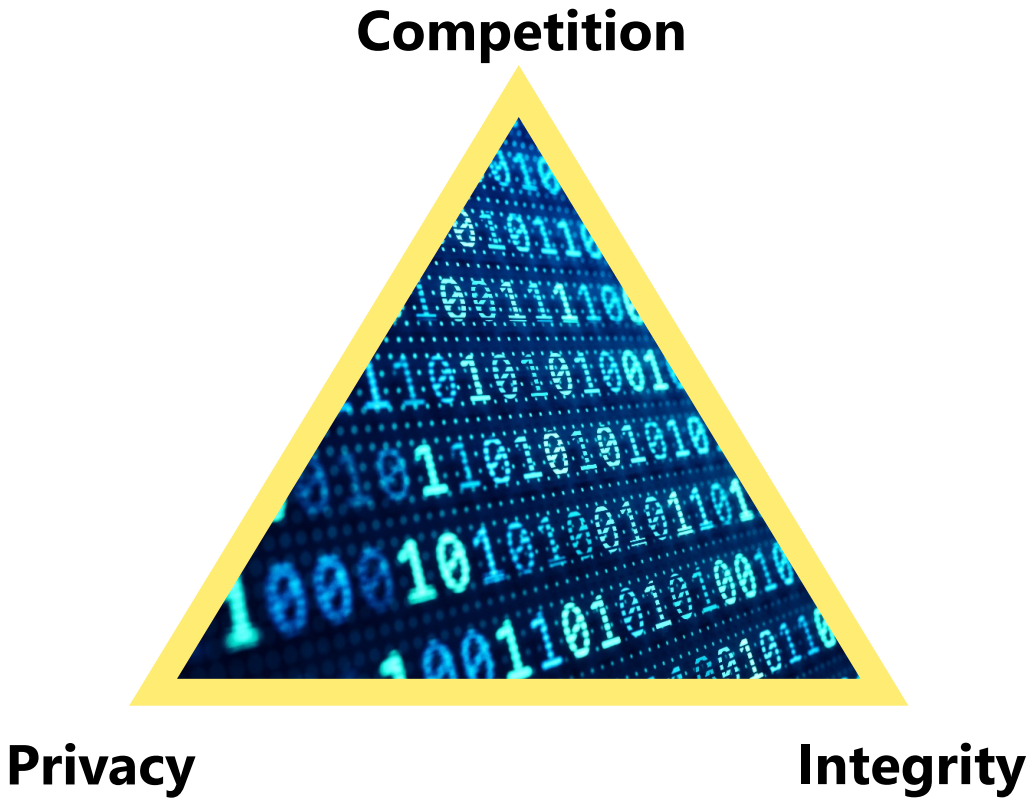
# An example of a monetary system with retail CBDC and commercial banks



# CBDCs can be designed to have a limited footprint – like cash today

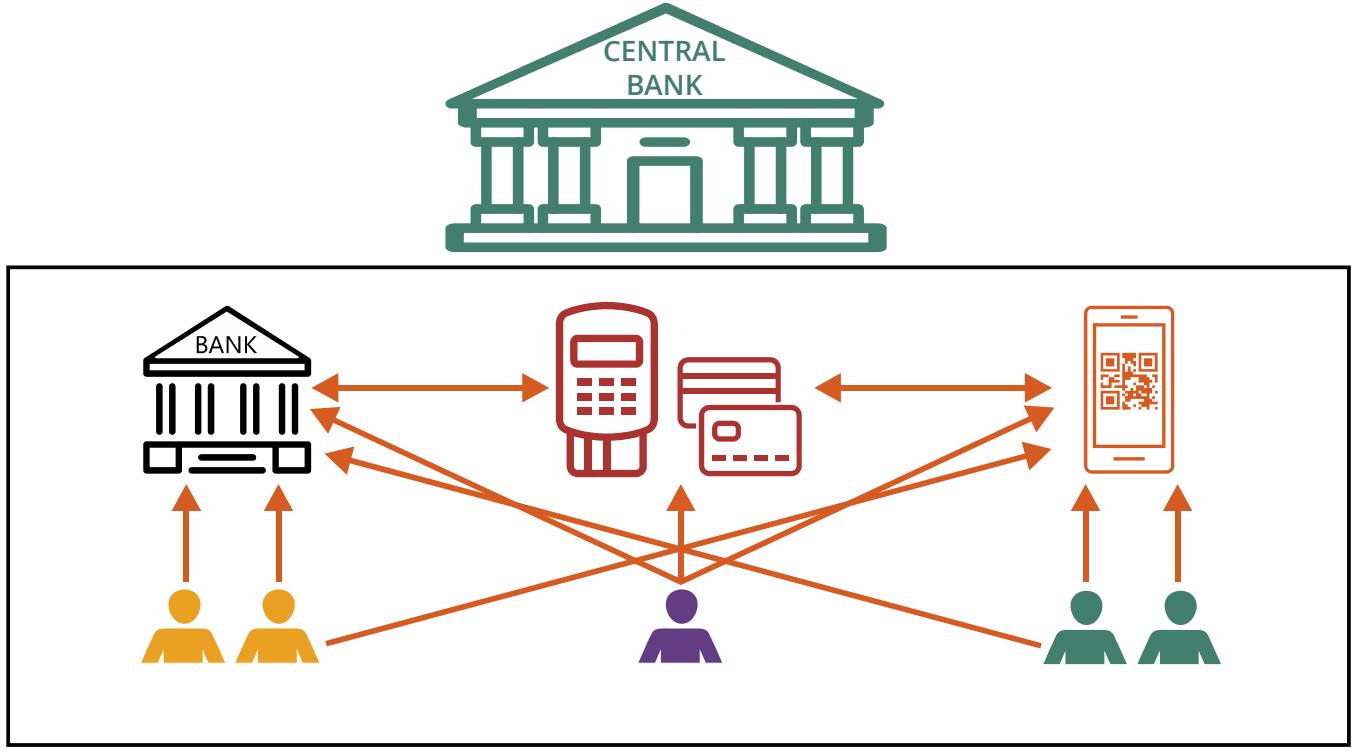


# Challenges arising from the centrality of data in the digital economy

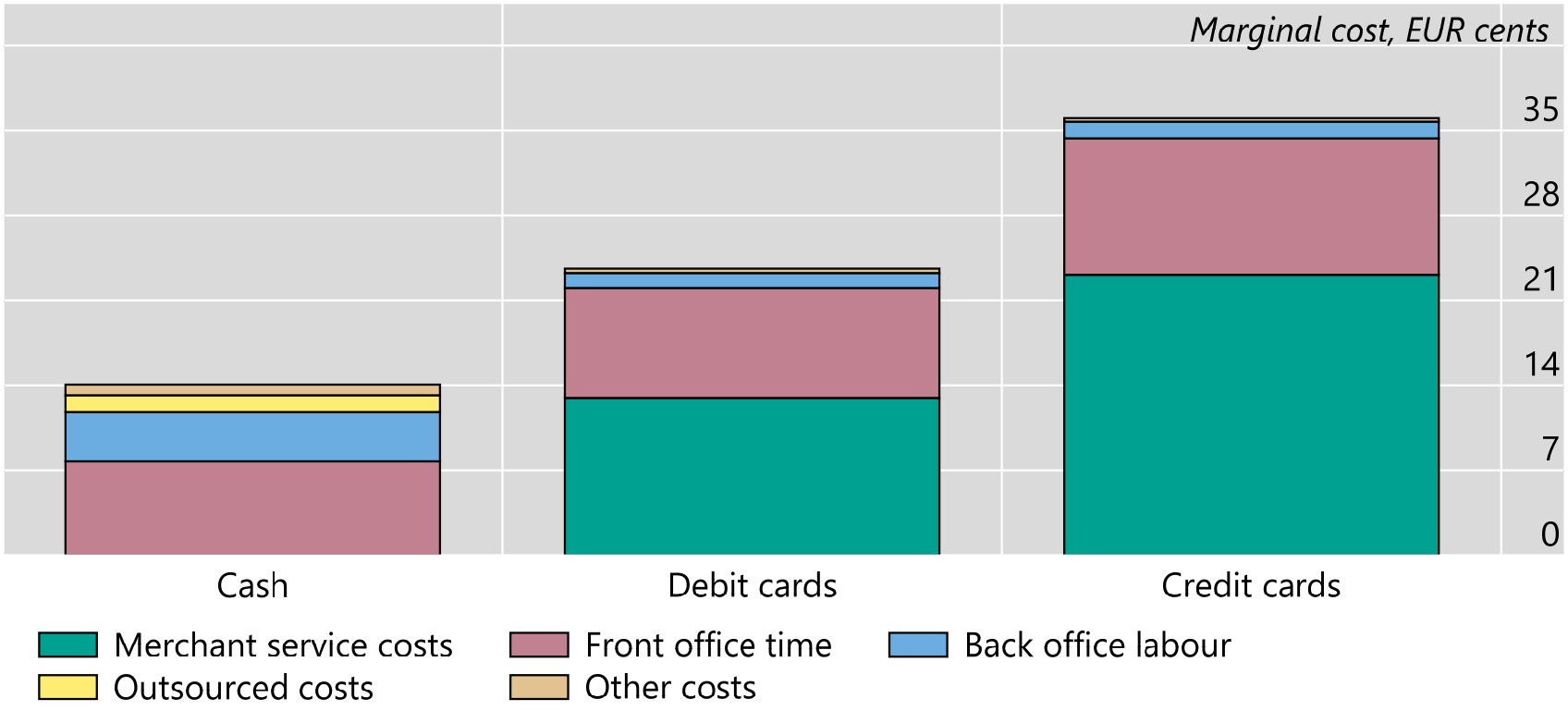


# Competition and financial inclusion

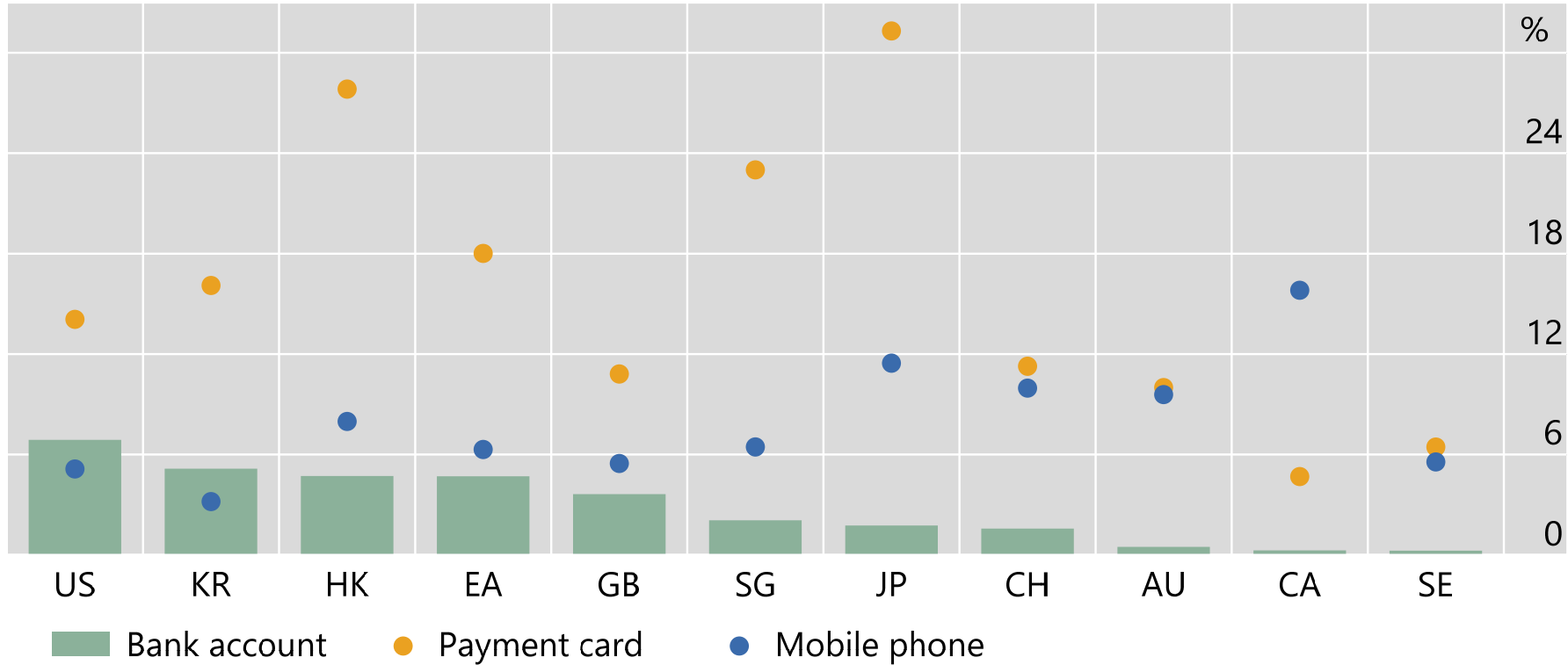
# An open platform can channel network effects towards a virtuous circle



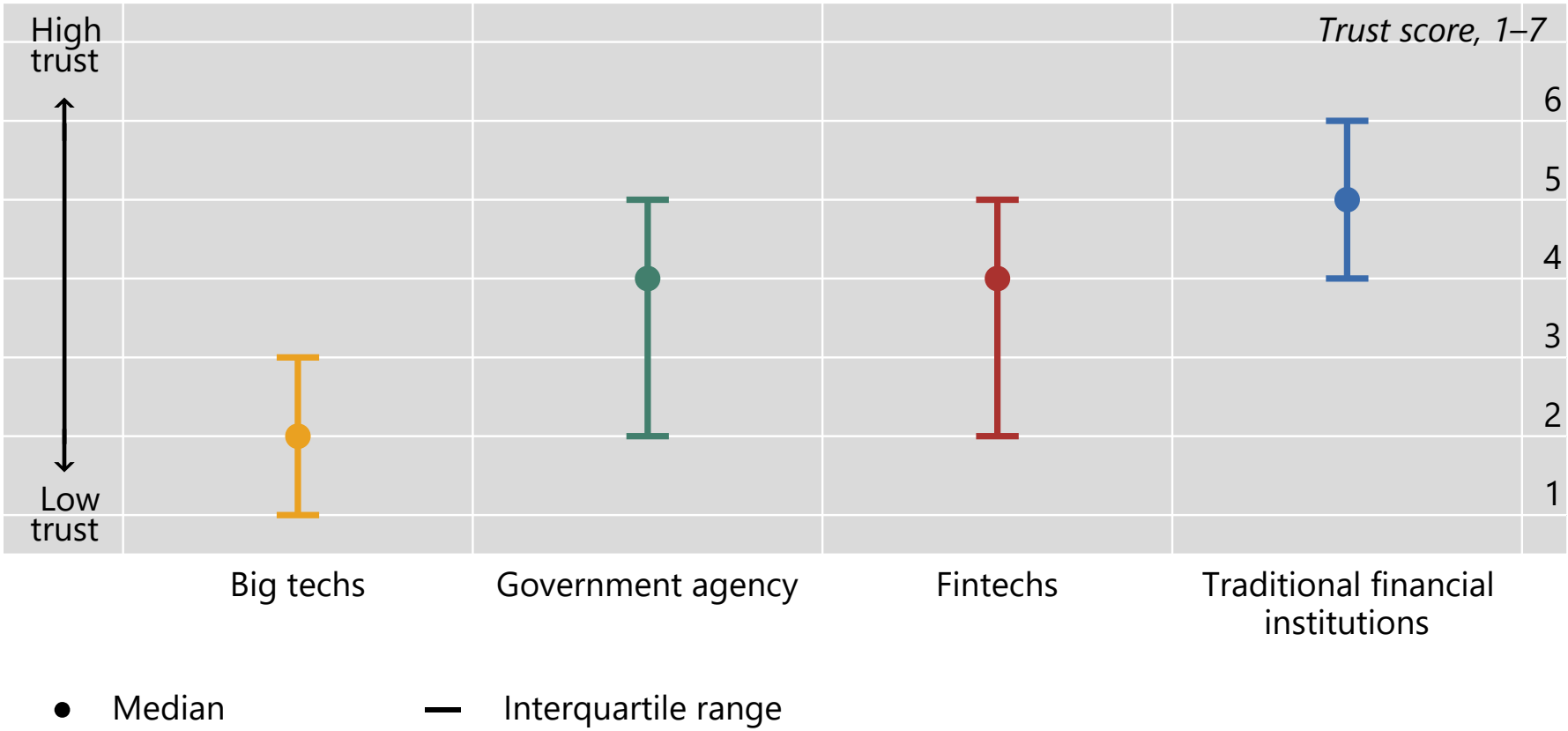
# In spite of technological progress and declining information processing costs, card payments are still more expensive than cash for a €25 transaction



# Even in advanced economies, many households did not have bank accounts, payment cards and mobile phones in 2017

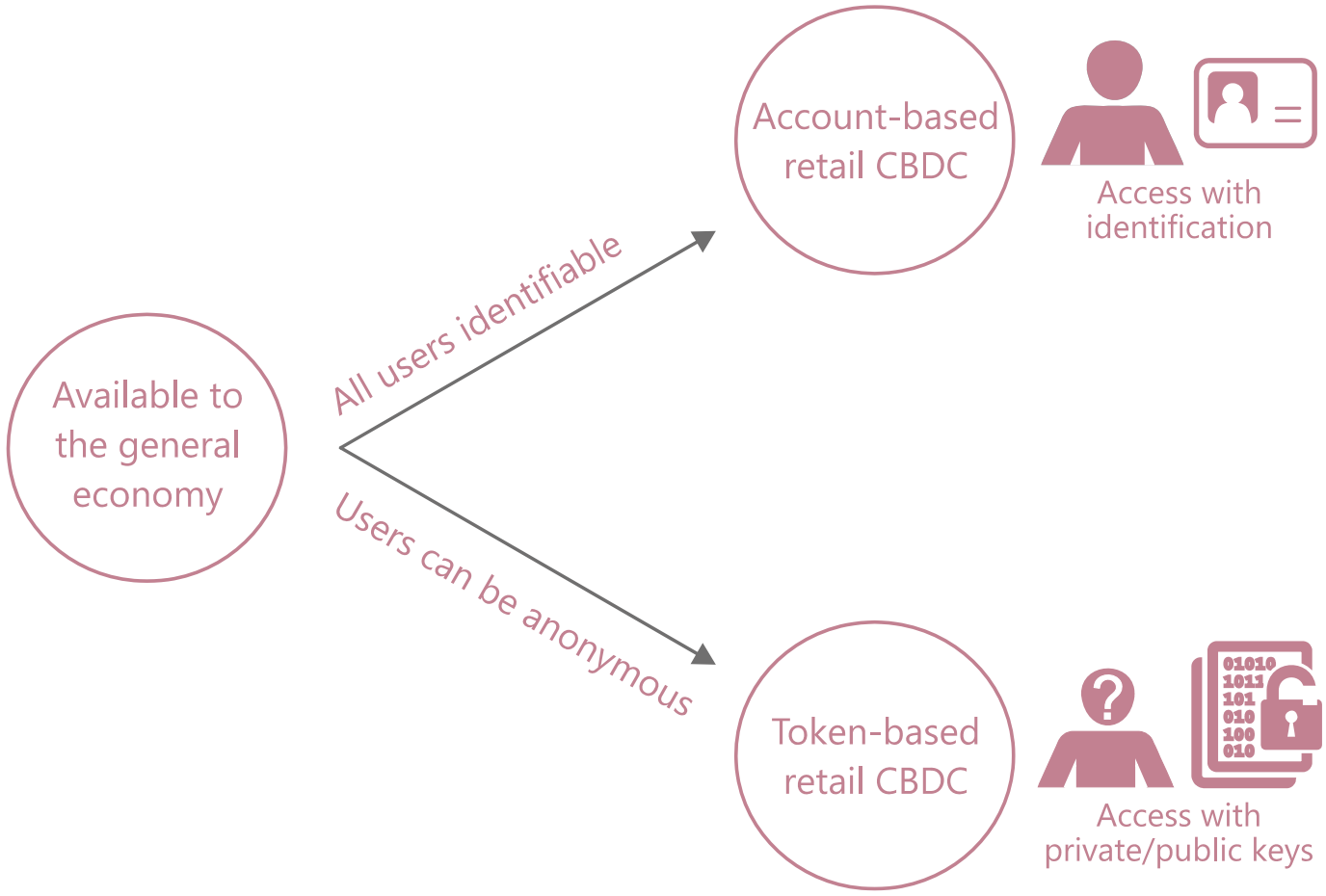


# American consumers trust big techs the least to safeguard their personal data



# Identification and privacy in CBDC design

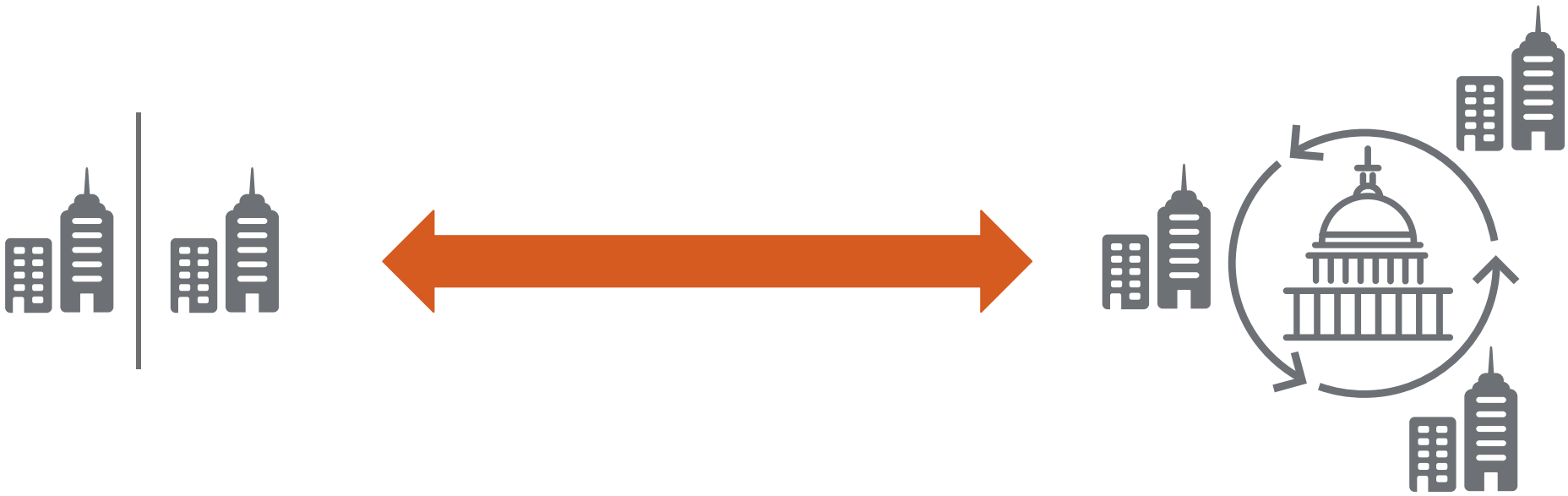
# A key design choice: should CBDCs be account-based or token-based?



# There is a continuum of governance arrangements for digital ID

Separate private digital ID systems

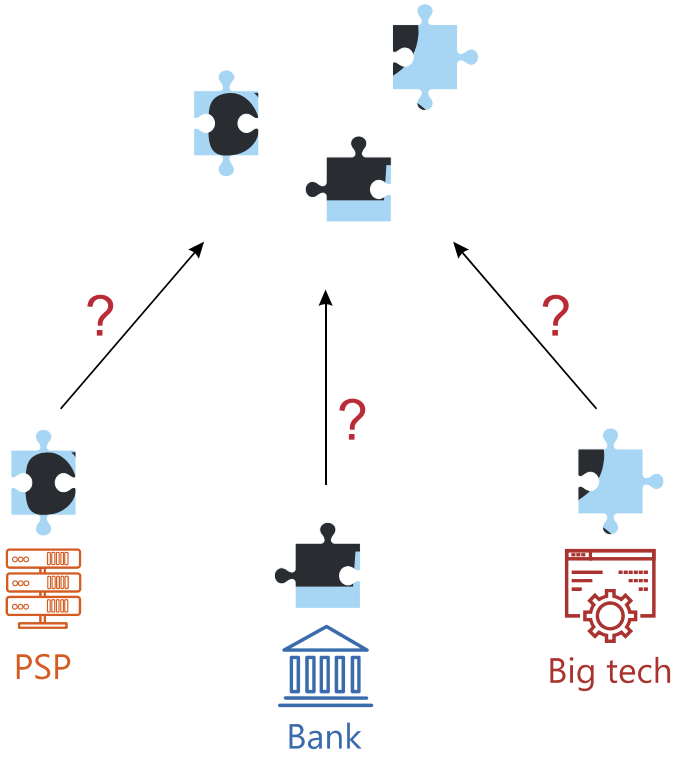
Government-issued digital ID



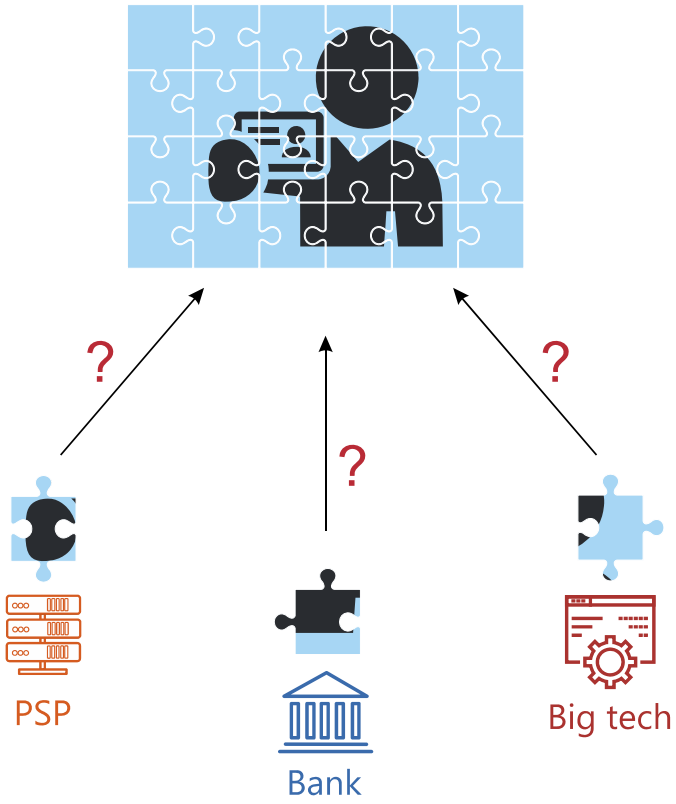
Private party

Government

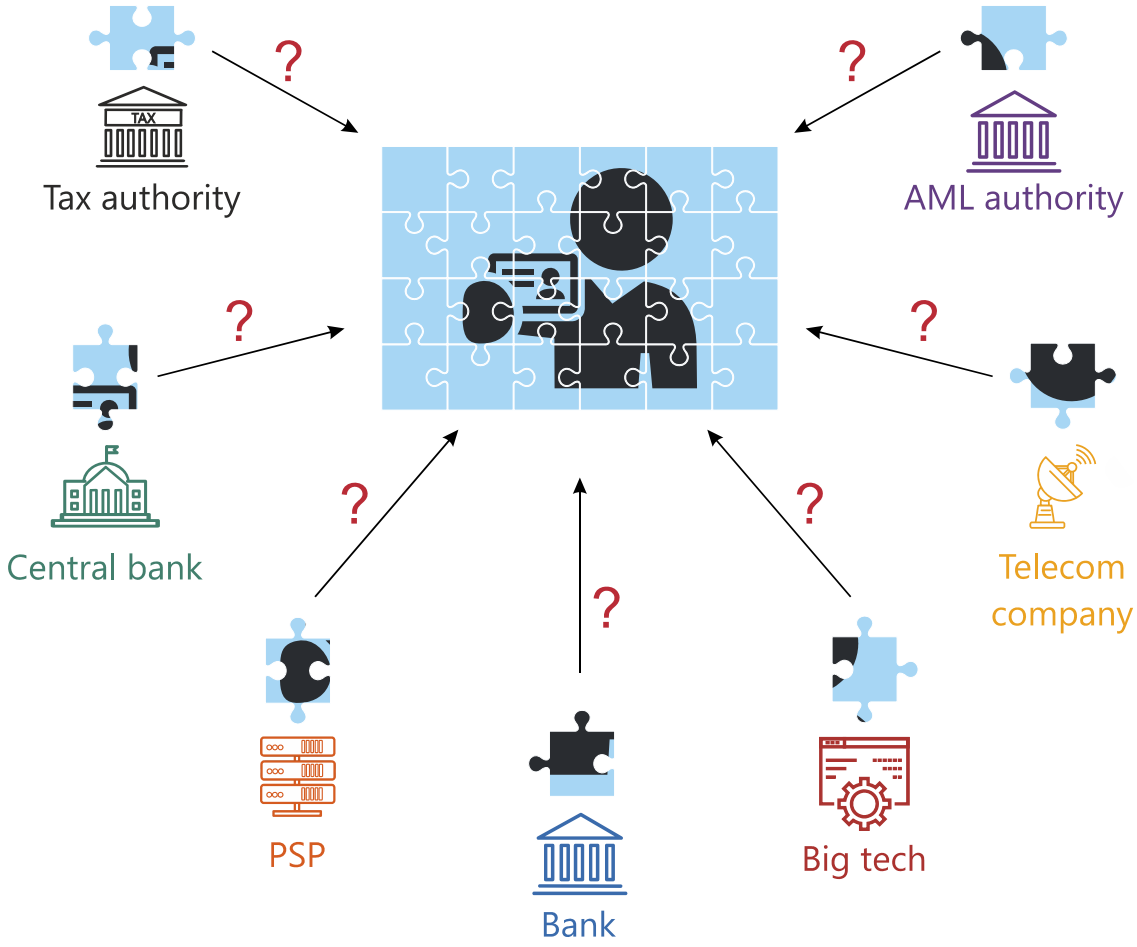
# Jigsaw puzzle principle: each provider should have access only to data that are strictly necessary for their task



# …and shares only what is needed in a specific case

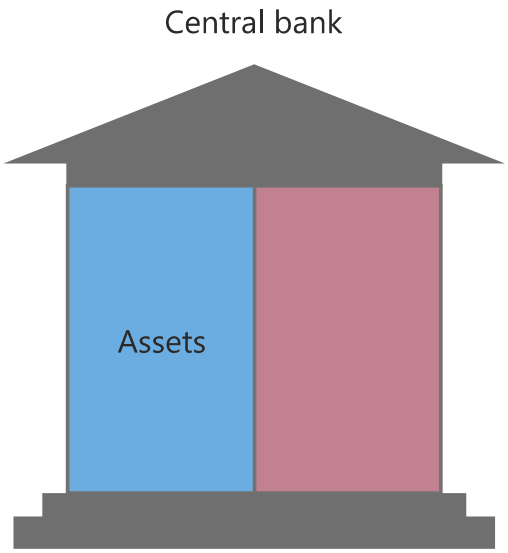


# No provider holds all the pieces of the puzzle; only the individual user does



# CBDC architectures and the financial system

# The “direct model” of CBDCs entails a large operational role for the central bank

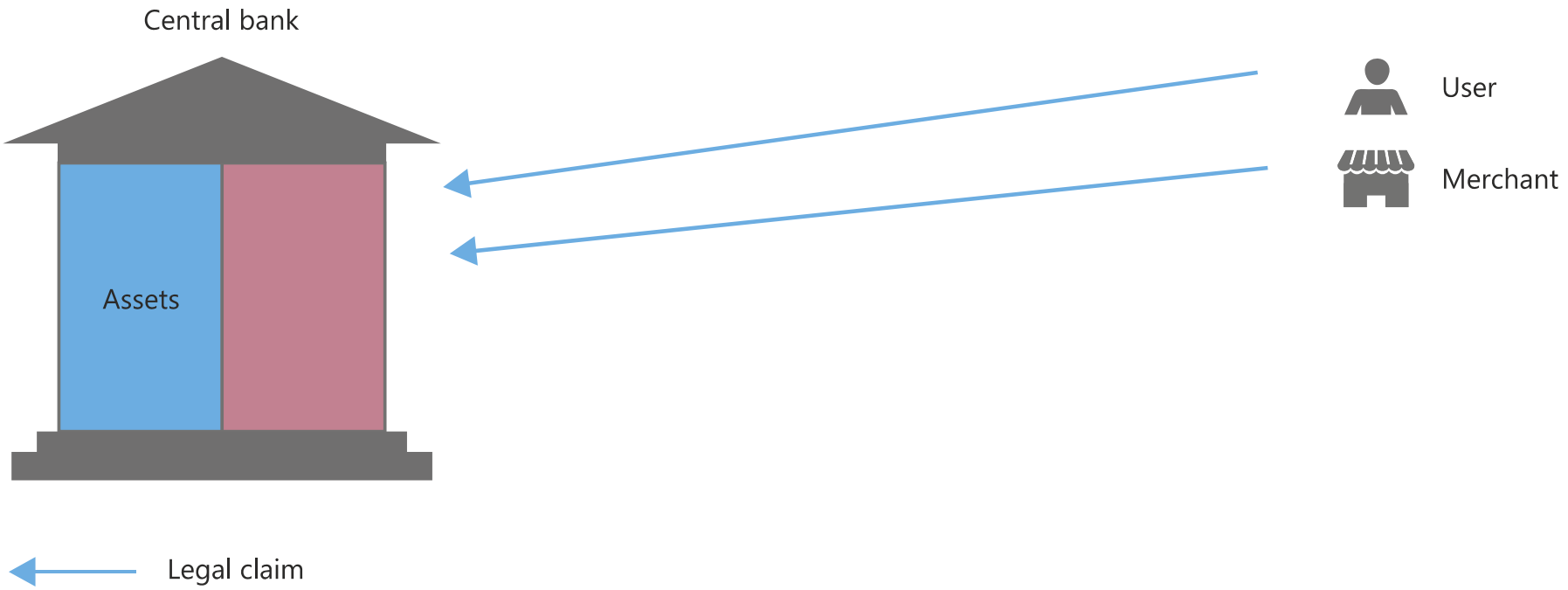




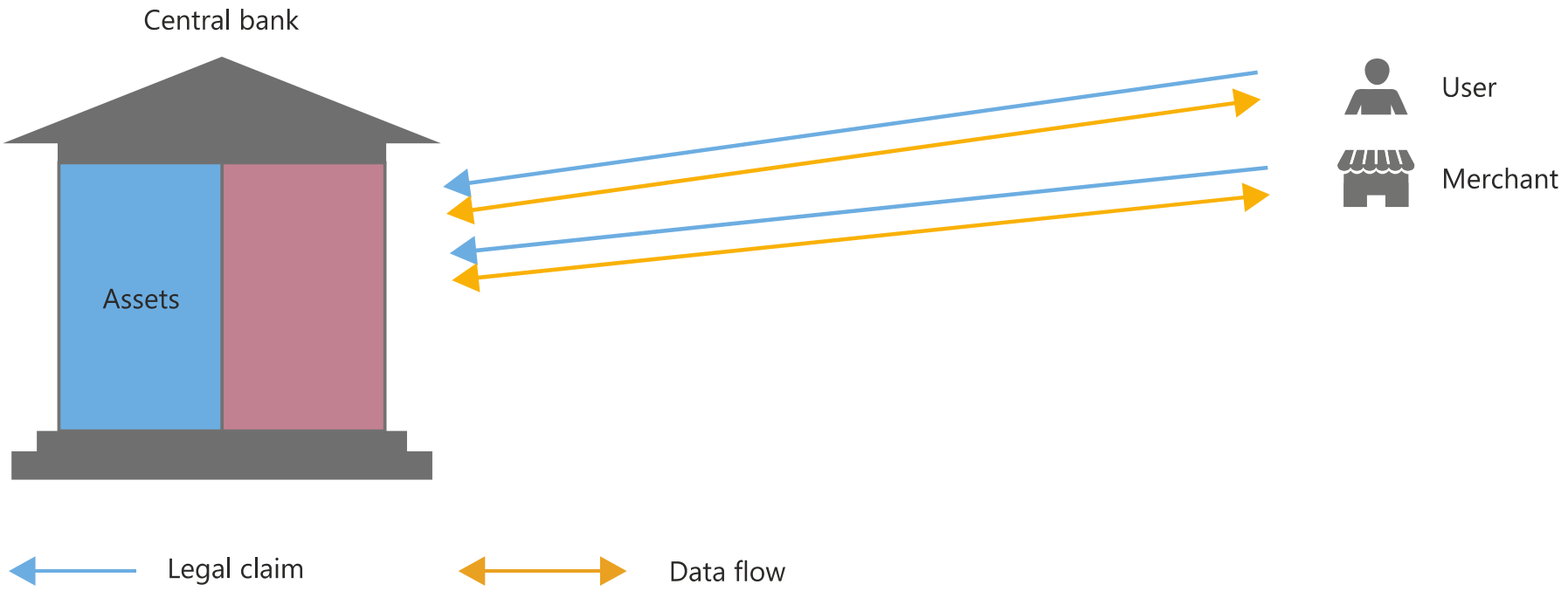
User


Merchant

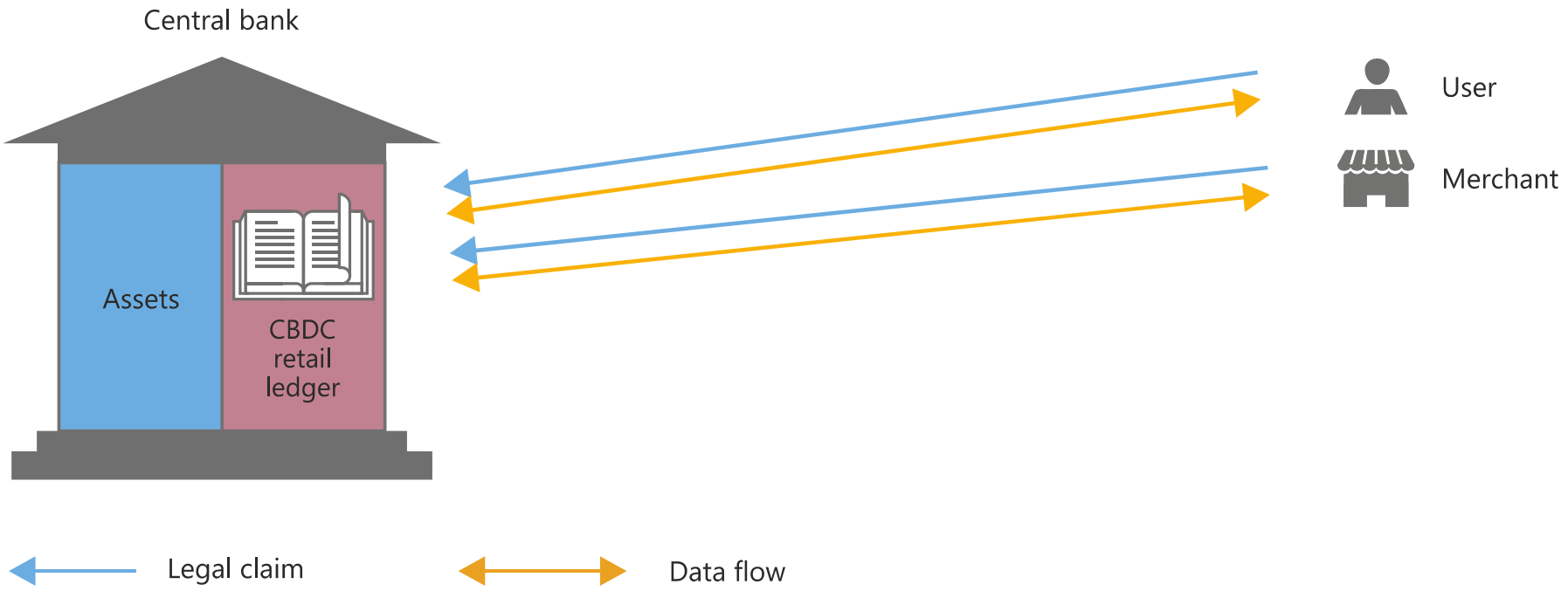
# Users and merchants have claims on the central bank without an intermediary



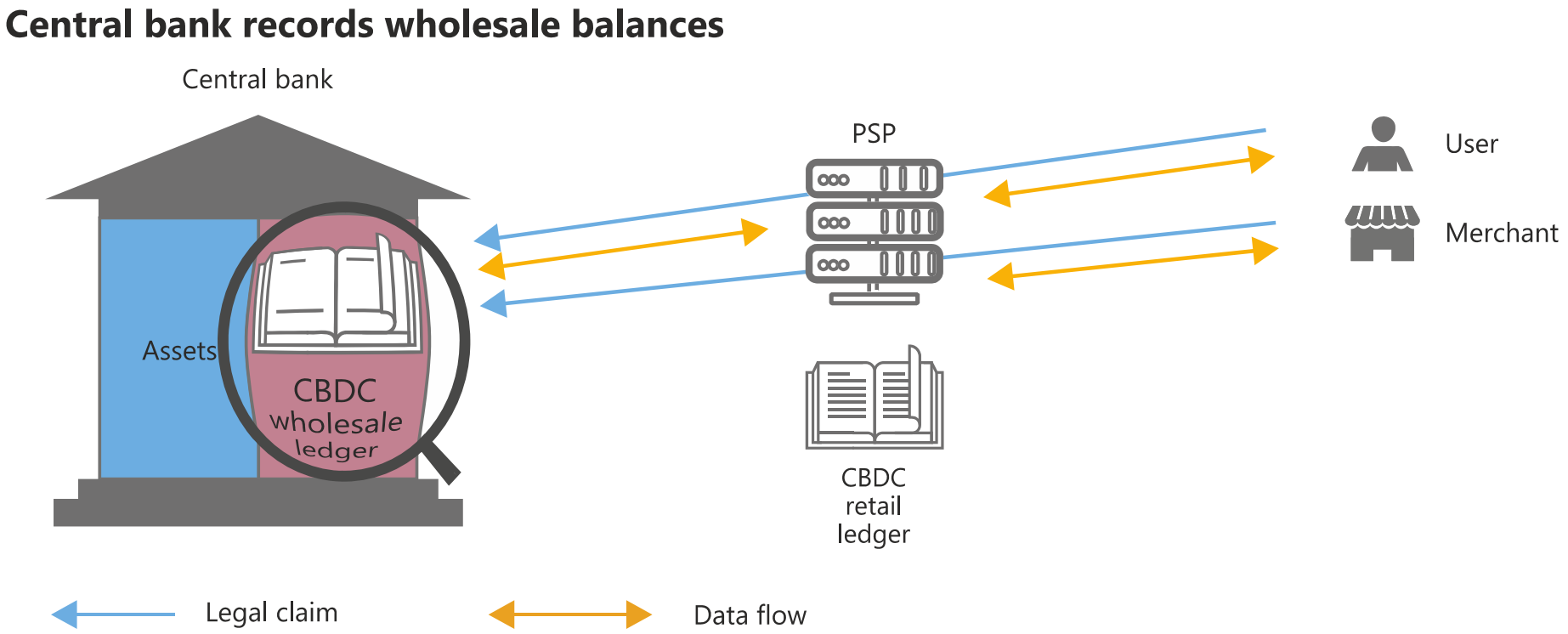
# Payment information flows directly from users and merchants to the central bank…



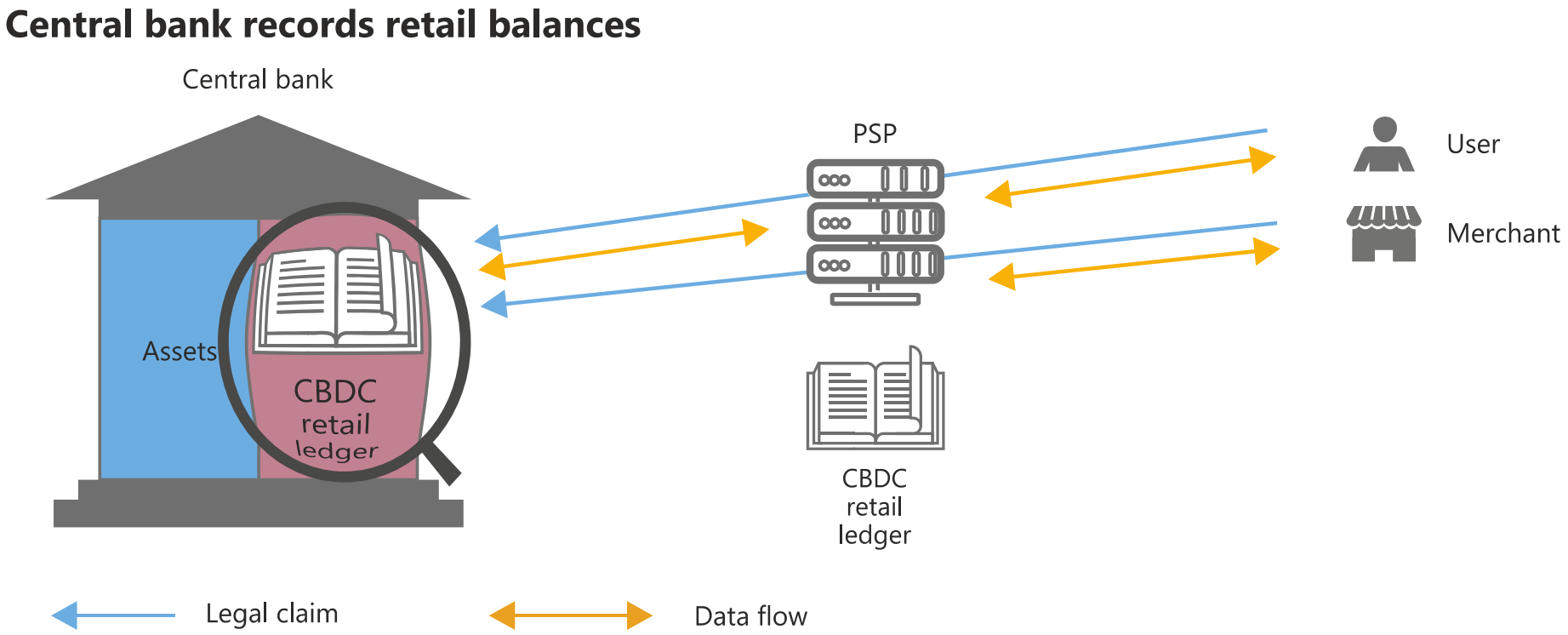
# …and the central bank maintains the full ledger of retail transactions



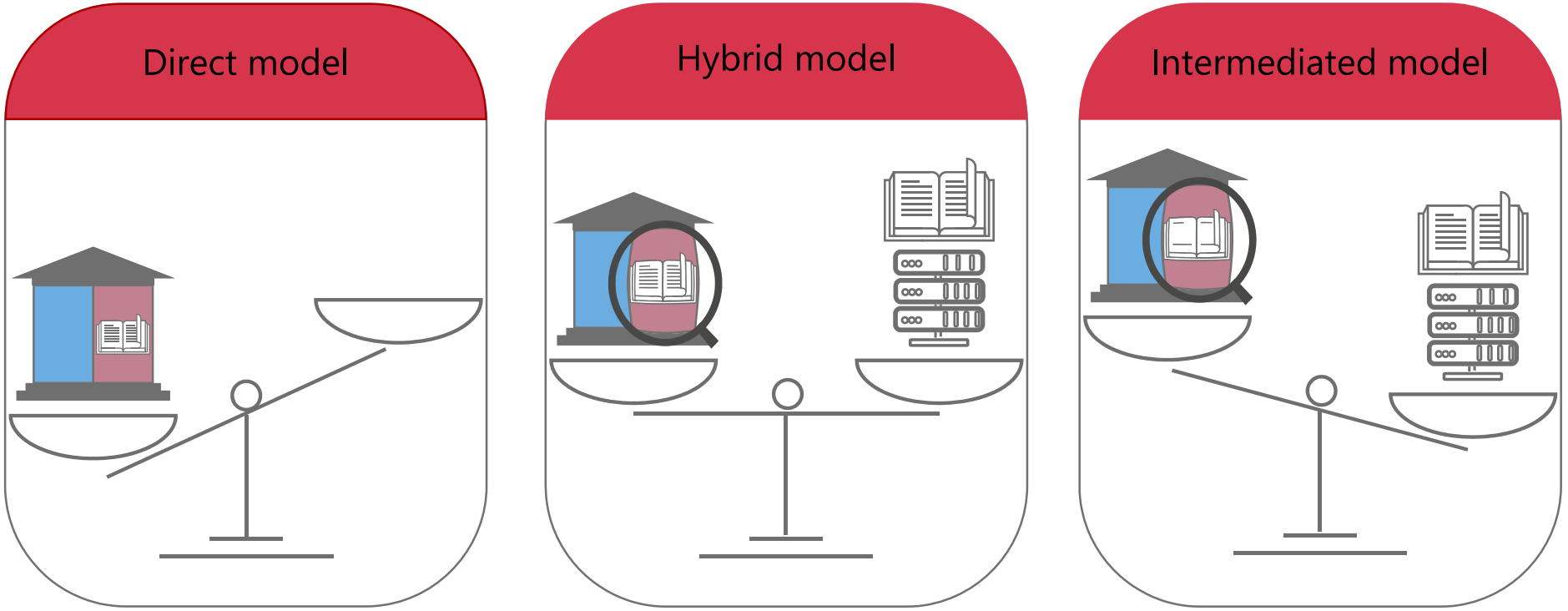
In the "intermediated model", the central bank has a wholesale ledger of only payments between PSPs, not those between the individual users



# In the “hybrid model”, the central bank retains a copy of the full retail ledger

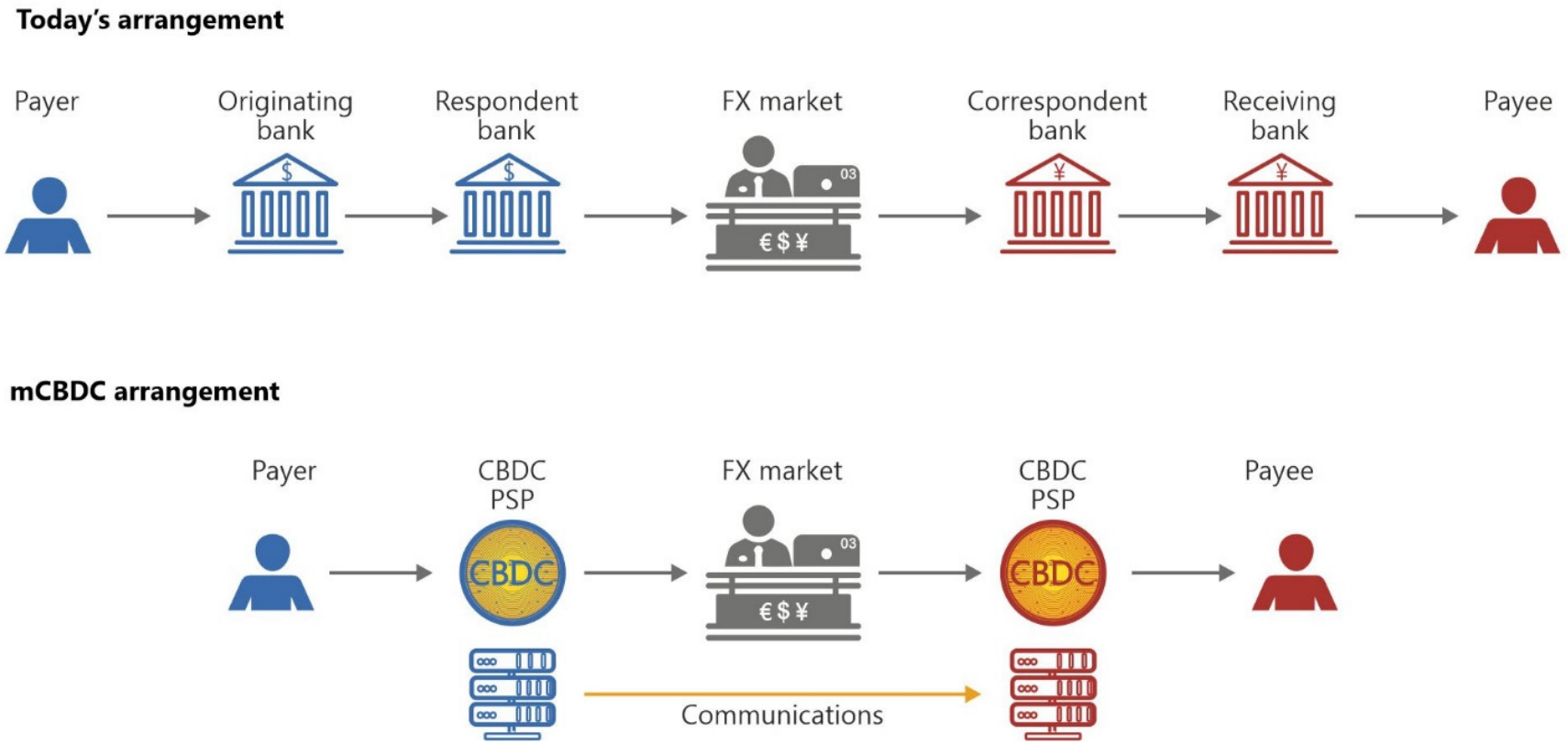


# Operational involvement of the central bank is highest in the direct model, and lowest in the intermediated model

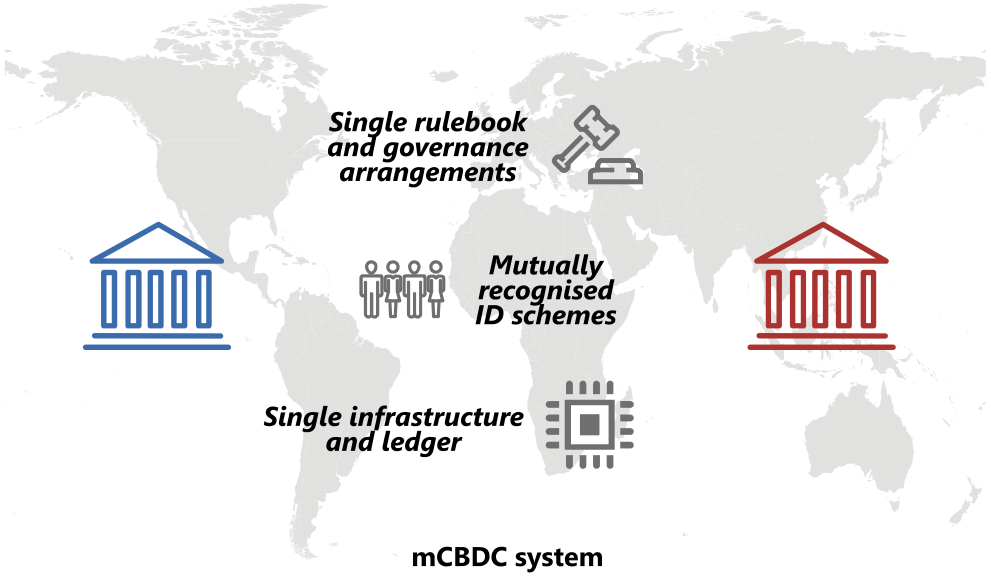


# The international dimension of CBDC issuance

# CBDCs could simplify the monetary architecture and substantially streamline the cross-border payment chain



# Multi-CBDC arrangements can facilitate cross-border payments




**mCBDC Model 3:**

**Integration into a single system**

- Multiple CBDC can be run on a single platform (eg mCBDC Bridge or Project Dunbar)
- Central banks mutually recognise ID schemes