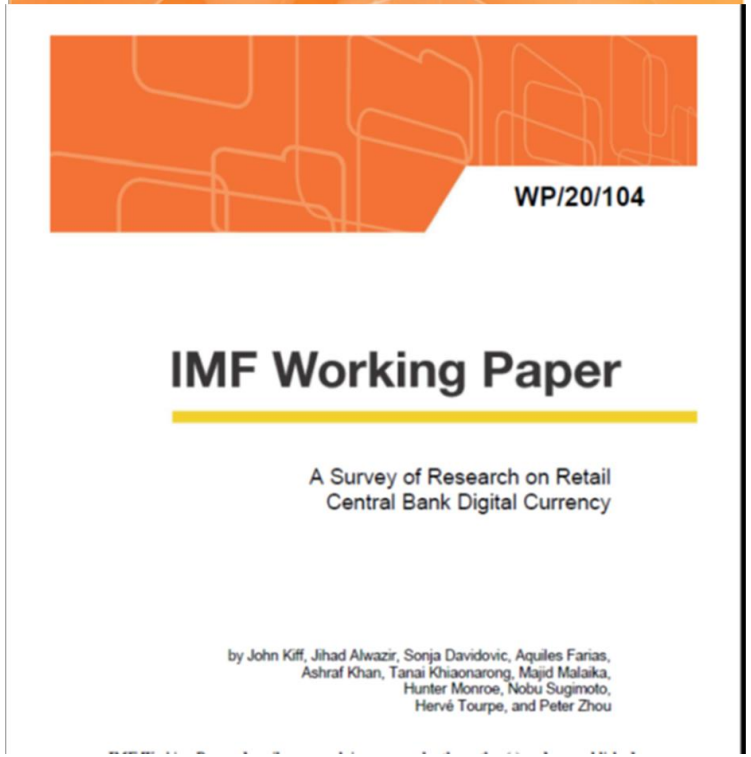




# Retail Central Bank Digital Currency

## Operational Considerations

John Kiff, April 29, 2021

# The Central Bank Digital Currency (CBDC) Landscape

| | Retail CBDC | Wholesale CBDC | Synthetic CBDC |
|---|---|---|---|
| Representation of sovereign currency | √ | √ | √ |
| Backed by monetary authority | √ | √ | √ /1 |
| Issued by monetary authority | √ | √ | |
| Liability of monetary authority | √ | √ | |
| Accessible to the general public | √ | | ? |
| Peer-to-peer transactions | ? | ? | ? |
| Legal tender or *lex monetae* | ? | ? | ? |
| 1. Backed by monetary authority deposits or wholesale CBDC | | | |

| Jurisdictions Where Retail CBDC Is Being Explored (as of April 22, 2021) | | |
|---|---|---|
| Where central banks have launched or piloted (or soon will) | | |
| Bahamas (fully launched) | Eastern Caribbean (pilot launched) | Jamaica (pilot launch in May) |
| China (pilot launched) | Ecuador (pilot done & project discontinued) | Uruguay (pilot completed) |
| Where central banks have done proofs of concepts (or soon will) | | |
| Japan (proof of concept in Spring) | Sweden (proof of concept underway) | |
| Korea (proof of concept started) | Ukraine (proof of concept done) | |
| Where central banks are in advanced stages of research and development | | |
| Canada | Russia (latest report) | United States |
| Euro Area | United Kingdom | |
| Where central banks are still in the exploratory stages | | |
| Australia | Iceland | Norway |
| Brazil | India | Pakistan |
| Chile | Indonesia | Philippines |
| Curaçao en Sint Maarten | Israel | South Africa |
| Czech Republic | Kenya | Switzerland |
| Denmark | Kuwait | Thailand |
| Eswatini | Madagascar | Trinidad and Tobago |
| Finland | Malaysia | Tunisia |
| Ghana | Mauritius | Turkey (update) |
| Haiti (Bitkòb) | Morocco | |
| Hong Kong SAR | New Zealand | |
| Where central banks have explored or are exploring issuing retail CBDC (according to reputable news sources) | | |
| *Bahrain* | *Kazakhstan* | *Palestine* |
| *Egypt* | *Lebanon* | *Rwanda* |
| *Iran* | *Macau* | |

# Central Bank Motivations for Issuing CBDC

<table>
<tr><th>Emerging Market & Developing Economies</th><th>Advanced Economies</th></tr>
<tr><td>Financial digitalization and inclusion</td><td rowspan="2">Enhancing payment system competition<br><br>In face of declining cash usage</td></tr>
<tr><td>Reducing physical cash costs and risks (resilience)</td></tr>
<tr><td>Reducing dollarization</td><td>Distributing stimulus payments</td></tr>
<tr><td colspan="2">Improving monetary policy effectiveness: targeted policy, accessing granular real-time payments data, breaking through lower zero bound on policy rates</td></tr>
<tr><td colspan="2">Retain monetary sovereignty, including to derail global stablecoin adoption</td></tr>
<tr><td colspan="2">Cross-border payment efficiency (e.g., remittances)</td></tr>
</table>

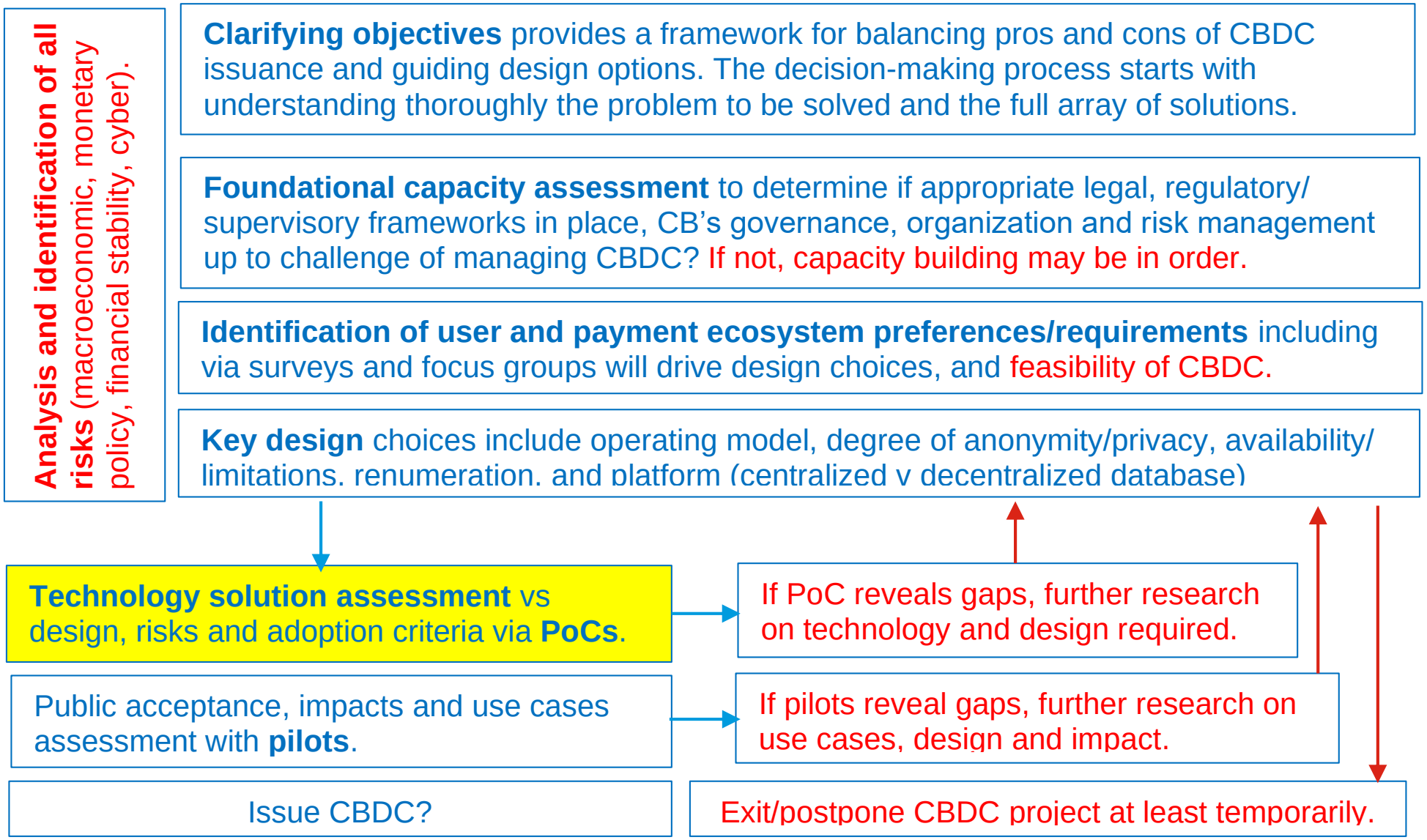
# Risks of Issuing CBDC

- CBDC could affect **financial stability and banking intermediation** if it competes with bank deposits.
  - Banks could also increase their reliance on wholesale funding, with implications for funding cost and stability, and market discipline.
  - Several suggestions have been put forward to control potential banking sector disintermediation, including holding/transaction limits, variable interest rates/fees, and restricted conversion modalities.
- **CBDC may increase bank run risks** by offering a readily available, safe, and liquid alternative to deposits, depending on the CBDC's design.
- CBDC could affect the **transmission of monetary policy.**
- **CBDC of reserve currency countries** available across borders could increase **currency substitution** ("dollarization").

# Design Considerations

- **Availability and limitations**: Decisions have to be made about who can hold CBDC, limits on holding/transaction size, offline availability and convertibility limits.
- **Privacy and transparency**: Financial integrity, privacy and transparency requirements need to be balanced.
- **Interest-bearing:** CBDC could be remunerated to modulate demand or enhance monetary policy transmission. Even if not interest bearing at first, capacity should be incorporated into design.
- **Programmability**: Point-of-sale tax payments, integration with physical devices or IoT applications, or automate distribution of economic relief based on specific demographic or other characteristics.
- **Ledger (de)centralization**: If a decentralized platform is chosen, decisions have to made as to whether ledger maintenance is permissioned or public.
- Cross border functionality and inter-operability?

# CBDC Decision-Making Process Flow




Strategy & Policy Risks
Payment Systems
Consumer Protection
Price Stability
Financial Stability
Financial Integrity
Financial Inclusion
Economic Growth
Reputational Risks
Fraud
Legal
IT Infrastructure
Cybersecurity
Culture, Behavior
Outsourcing / 3rd party
Governance, Decision-Making
Process, Project Mgmt
Operational Risks
Liquidity
Market
Credit
Financial Risks

# Discussion and Questions?

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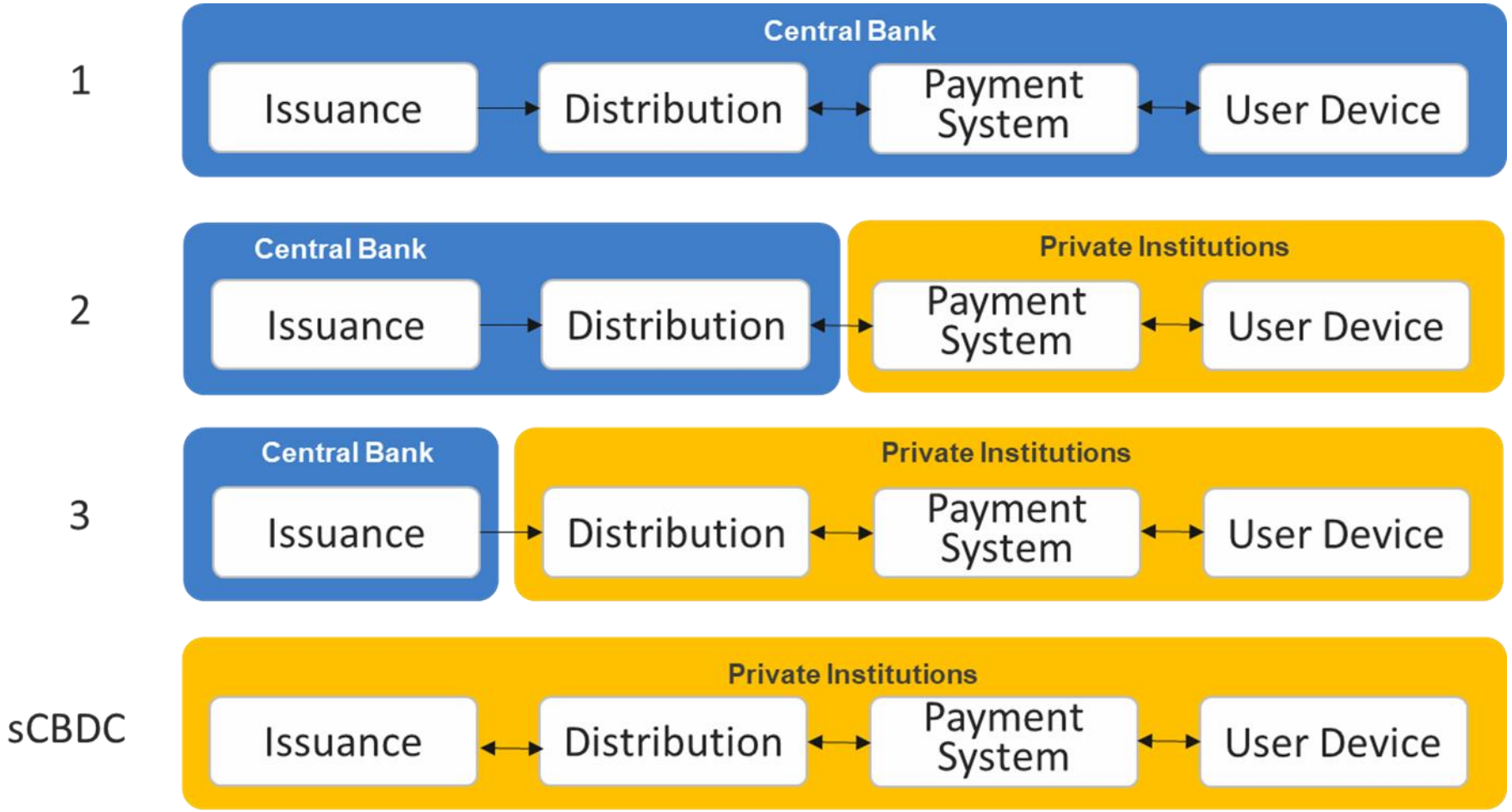
# Annex

# Key Design Choice: Single vs Multi-Tier Operating Model




Source: Roberto Giori Company

# CBDC Foundational Preconditions