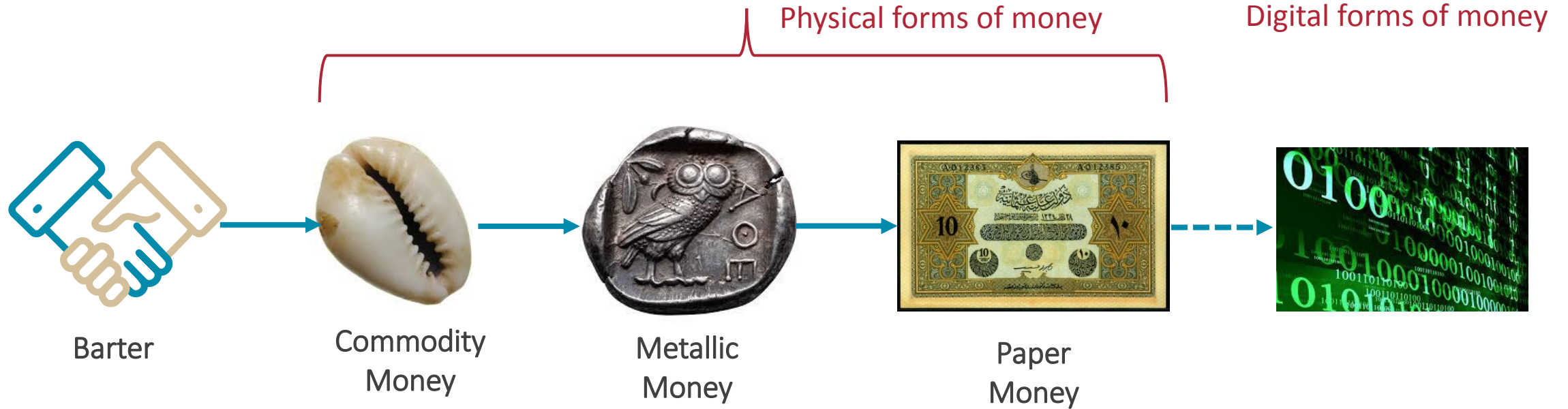


# Central Bank Digital Currencies: Challenges & Opportunities

(RESTRICTED)

13-15 May 2018 | Bodrum

# Evolution of Money









Question: How cash can be converted into digital form keeping its basic features?

Distributed Ledger Technology (DLT) & Cryptocurrencies








# Cryptocurrencies / Crypto-assets / Private Digital Tokens



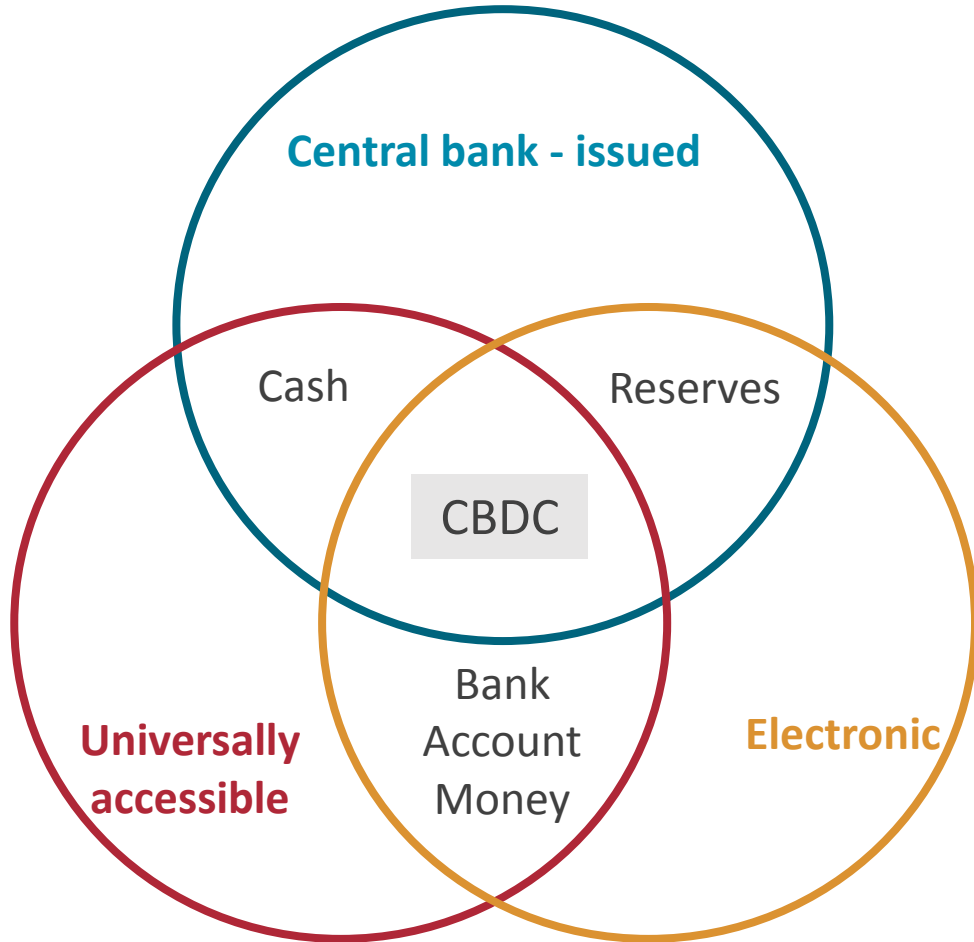
	Store of Value	
	Medium of Exchange	
	Unit of Account	

## Risks

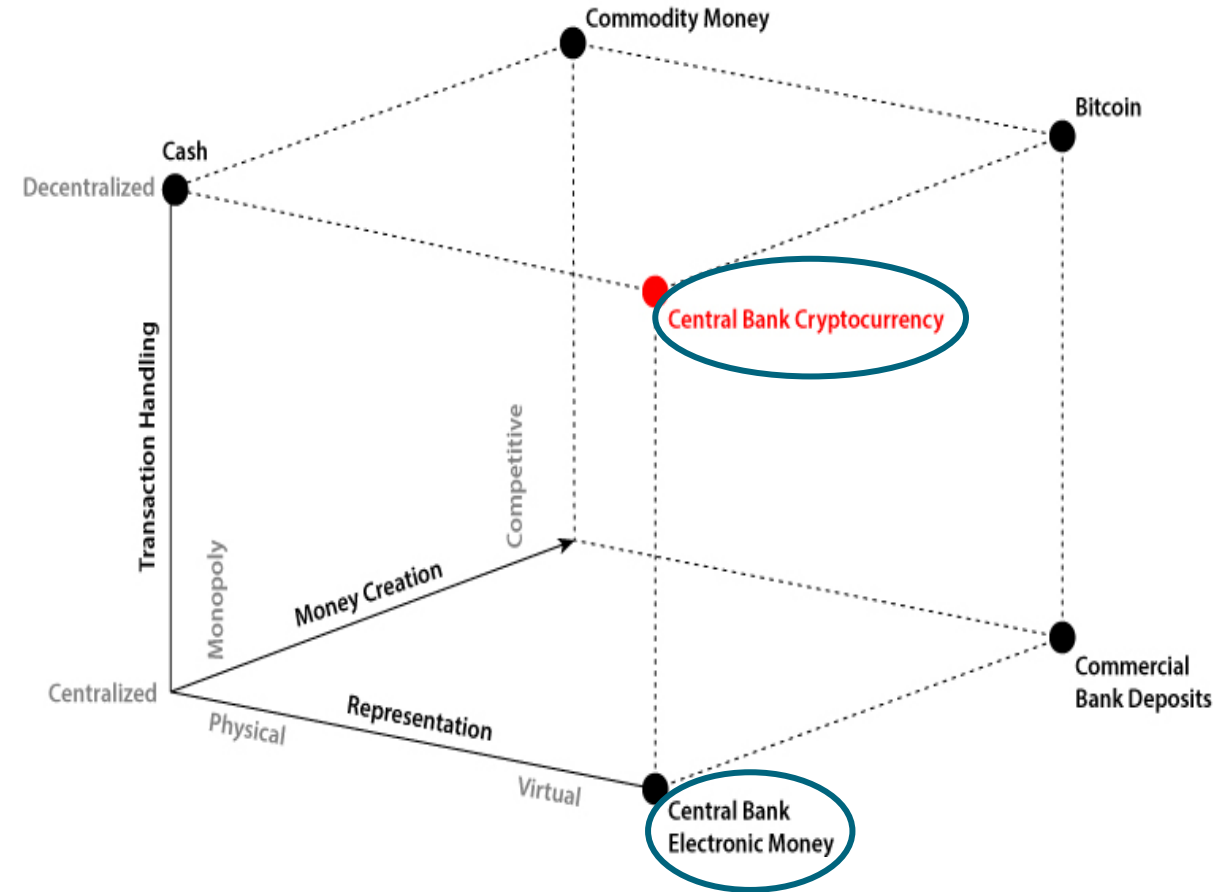
-  Use in illegal activities (AML/CTF/ Tax evasion)
-  Investor/customer protection, cyber security
-  Market, liquidity issues
-  Governance, legal, technical issues

Central Bank  
Crypto-currencies  
(CBCC) 

# Central Bank Digital Currency (CBDC)

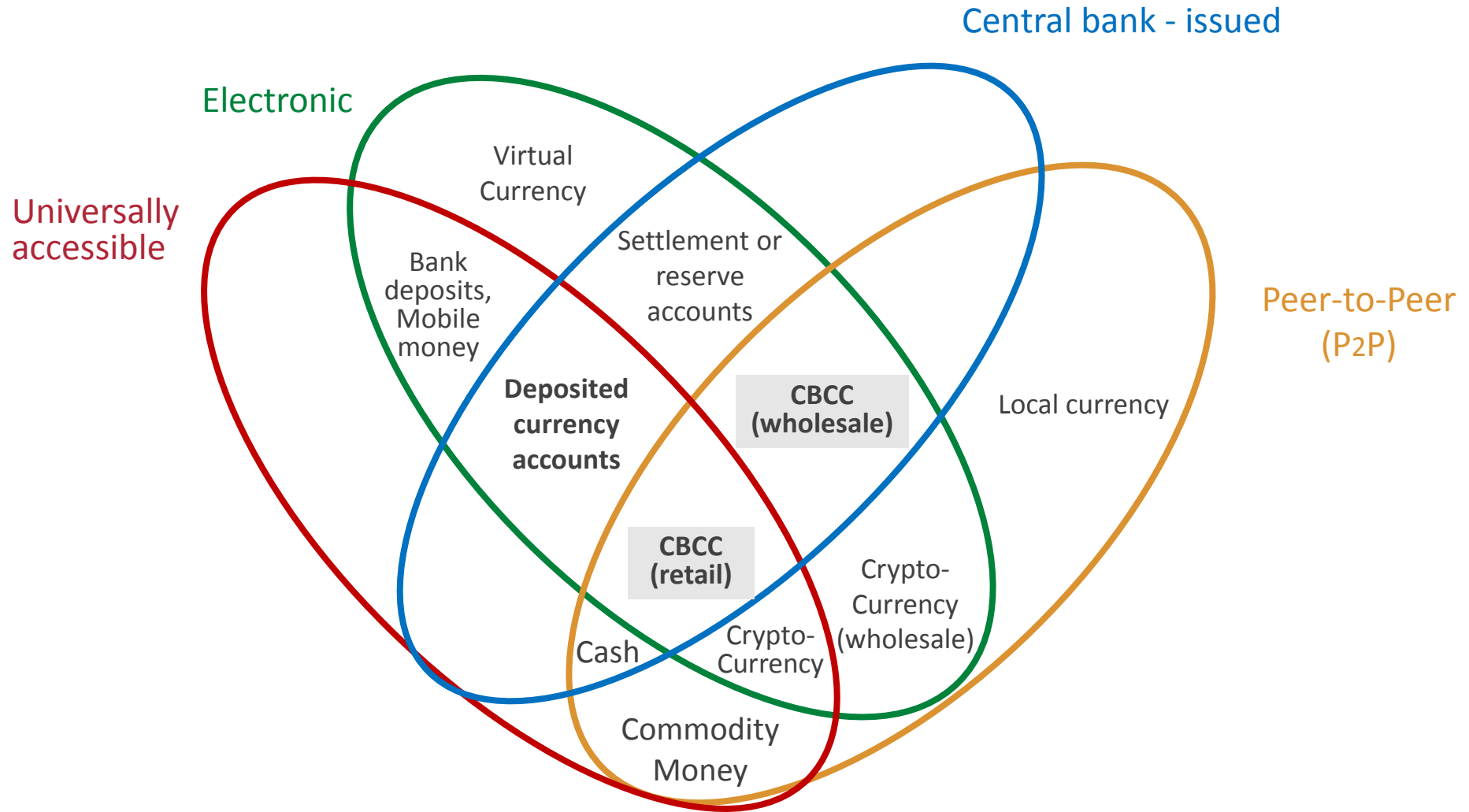


Source: Bjerg, O (2017): "Designing new money – the policy trilemma of central bank digital currency", Copenhagen Business School (CBS) Working Paper.



Source: Berentsen A (2017): The Case for Central Bank Electronic Money and the Non-case for Central Bank Cryptocurrencies, Fed St Lois

# Taxonomy of Money: Money Flower



Source: Bech, M (2017): "Central bank cryptocurrencies", BIS Quarterly Review.

# Central Bank Studies

## Interest



**The People's Bank of China**  
Actively exploring and experimenting with CBDC systems.



**Bank of Estonia**  
Announced its plans to launch a CBDC as part of its e-Residency program.



**Central Bank of Russia**  
Sees many benefits of a national cryptocurrency (crypto-Ruble)



**The Central Bank of Malaysia**  
Says CBDC has potential for non-banks access

## Published research



**Bank of England**  
Analysis of the potential macro-economic impact of CBDCs.



**The Central Bank of Canada**  
Reports on Motivations and Implications of CBDC; Assessment Framework



**European Central Bank**  
Staff research on framework for potential CBDC



**Central Bank of Sweden**  
Research on requirements for and benefits of e-Krona

## PoCs (wholesale CBCC)



**The Monetary Authority of Singapore (MAS)**  
Developed and published a set of PoCs (Project UBIN)



**The Central Bank of Canada**  
Developed a DLT-based wholesale CBDC solution, CAD-coin (Project JASPER)



**Bank of Japan & European Central Bank**  
PoC for a cross-border DvP system (Project STELLA)



**The Hong Kong Monetary Authority (HKMA)**  
PoC for a DLT-based supply-chain finance system

## Implementations (backed by governments)



**The Central Bank of Ecuador**  
**Centralized payment system** backed by digital currency (2015). Faced with challenges gaining public trust (deactivated in April 2018).

**not by central bank**

**The Tunisian Post**








Virtual e-dinar accounts and e-dinar cards. Superseded by blockchain platform .

**not by central bank**

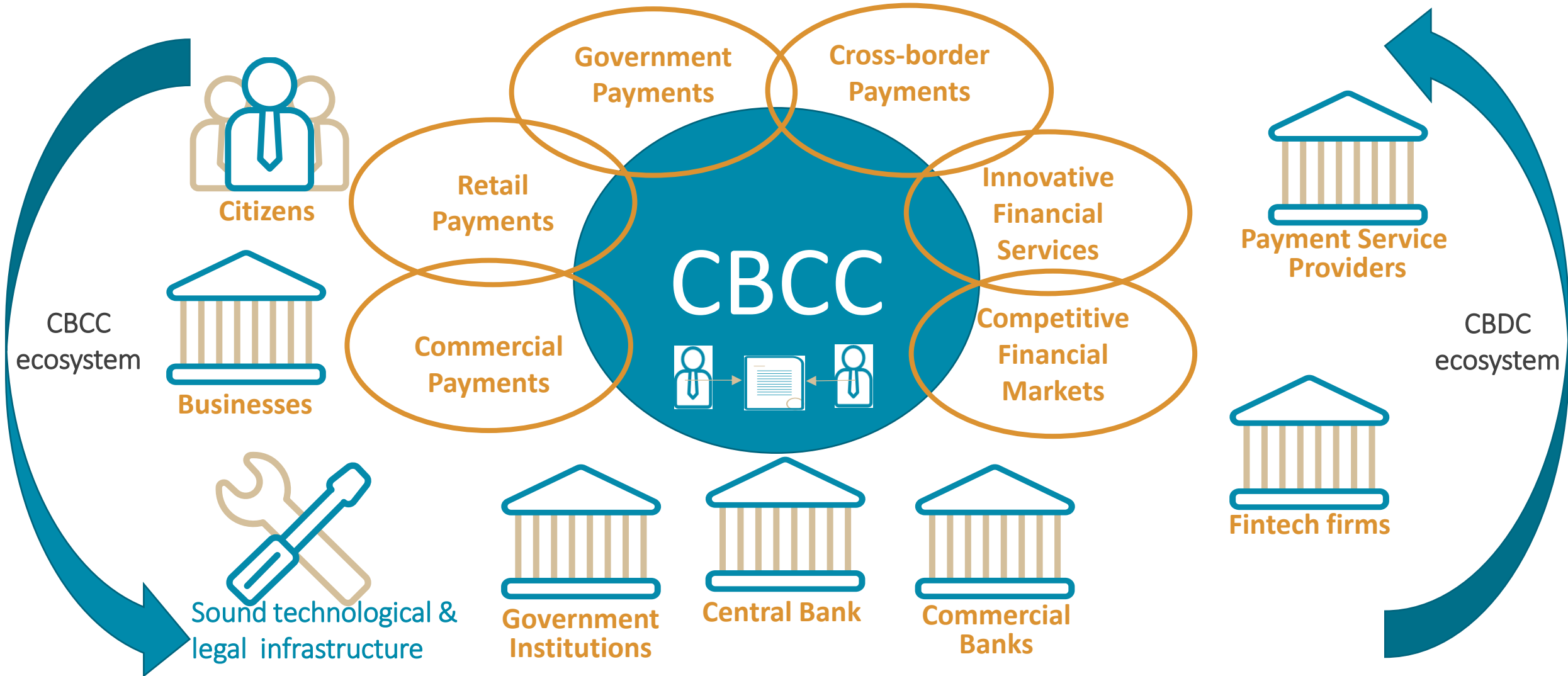
**The Government of Venezuela**

Backed by the country's oil and mineral reserves (2018)

## Main Features for Cash like CBCC – CBRT’s Perspective

-  Denominated in Sovereign Currency
-  Central bank liability
-  Legal tender
-  Anonymous
-  Universal
-  Convertible to/from other types of central bank money at par
-  None Interest Bearing

# Ecosystem & Potential Use Cases – CBRT’s Perspective





## Some Potential Benefits – CBRT’s perspective

Efficiencies by reducing cash usage

Extending financial inclusion

Efficient and immediate cross border payments to enhance inter-regional cooperation and trade

Increasing resilience of market infrastructure via distributed technology

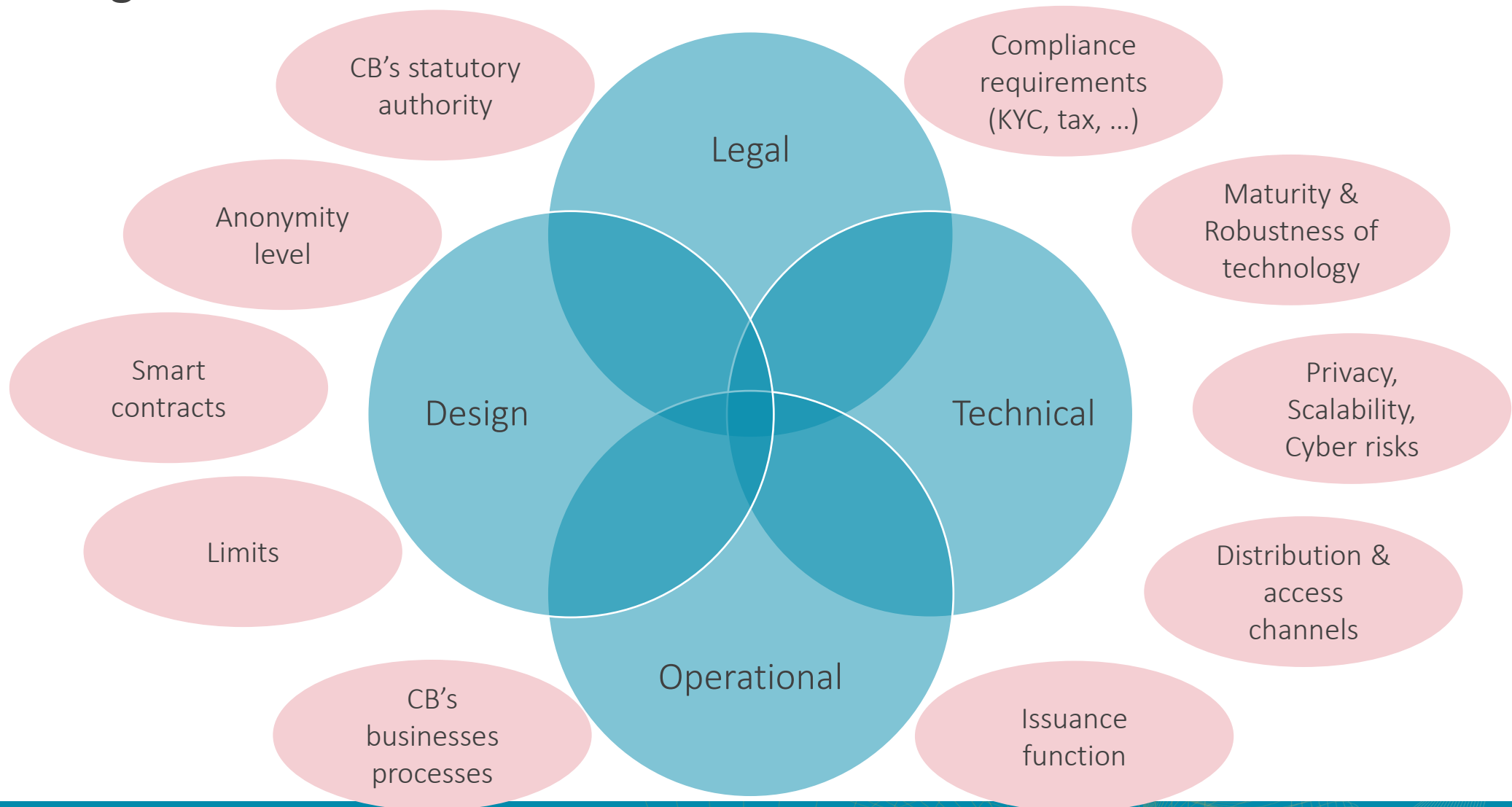
Facilitating access to central bank money for innovative new entrants

Reducing friction in payments

Reducing illicit use via increased transaction traceability ability for authorities



# Challenges & Considerations



# Studies Conducted & Planned by the CBRT

## CBCC PROJECT

Follow up & analysis of developments

Contribution to international studies (CPMI, FSB, G20)

Analysis of CBCC's necessity

- Features
- Use cases
- Risks and Benefits

Impact Analysis (wrt. Turkey's circumstances)

- on the CBRT
- on the financial system
- on citizens and businesses
- on general economy

Legal & Technical requirements

- Law of CBRT and other laws and regulations
- Technological platform and the eco-system for CBDC

Thank you

