

# Central banking & digital currencies

## Lecture I

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# Agenda

1. Introduction to central banking & money issuance
2. Digital currencies: overview
3. Central Bank Digital Currencies
4. Tokenised deposits
5. Stablecoins



# We are a global SecurityTech company and innovation leader in three segments



## DIGITAL SECURITY

Trusted protection of  
confidential systems,  
networks, data and identities



## FINANCIAL PLATFORMS

Holistic offering for  
contemporary payment and  
banking experiences



## CURRENCY TECHNOLOGY

Secure public currency  
solutions in physical and  
digital ecosystems

G+D is present in

# 41 countries

worldwide

**118** subsidiaries  
& joint ventures

**14,000** employees  
worldwide

Canada  
USA  
Mexico

**20**  
countries in  
Europe

Argentina  
Brazil

Nigeria  
South Africa  
Uganda

Egypt  
Iraq  
Saudi Arabia  
UAE

Bangladesh  
China  
India  
Indonesia  
Japan  
Malaysia  
Singapore  
South Korea

Australia



# 1. Introduction to central banking & money issuance

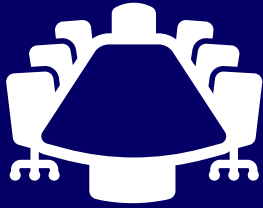






*Let There Be Money*

# Who creates money?



Government  
Fiscal Policy



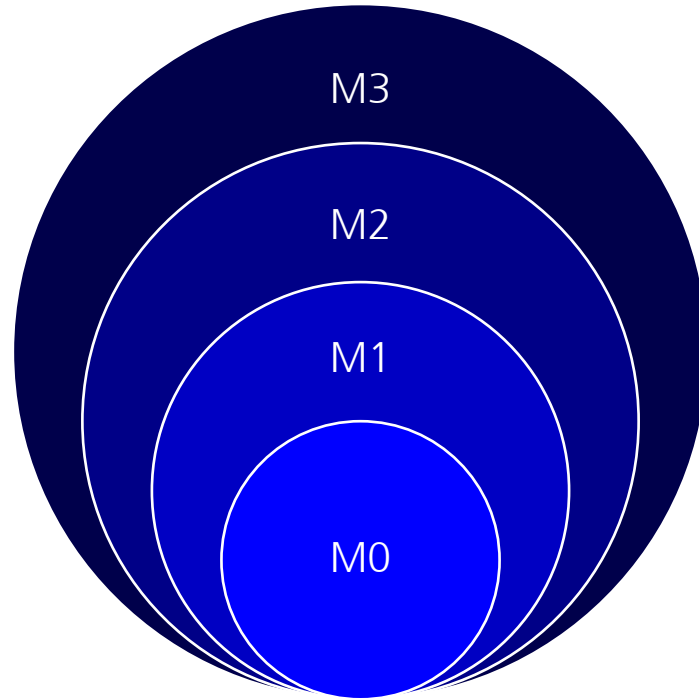
Central Bank  
Monetary Policy



Commercial Banks  
Intermediation



# Money supply





Assets		Liabilities	
Reserves	€ 400	Deposits	€ 100
Loans	€ 100	...	

Bank customer

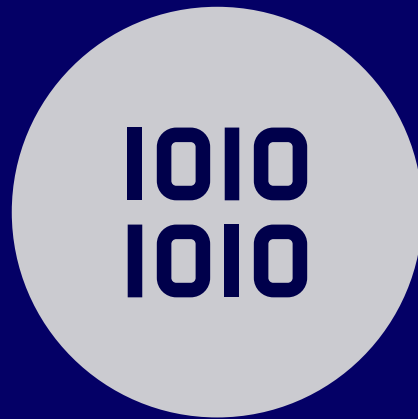


Assets		Liabilities	
Deposits	€ 100	Loan	€ 20
Cash	€ 50		

# Types of “classical” money



BASE MONEY



BROAD MONEY

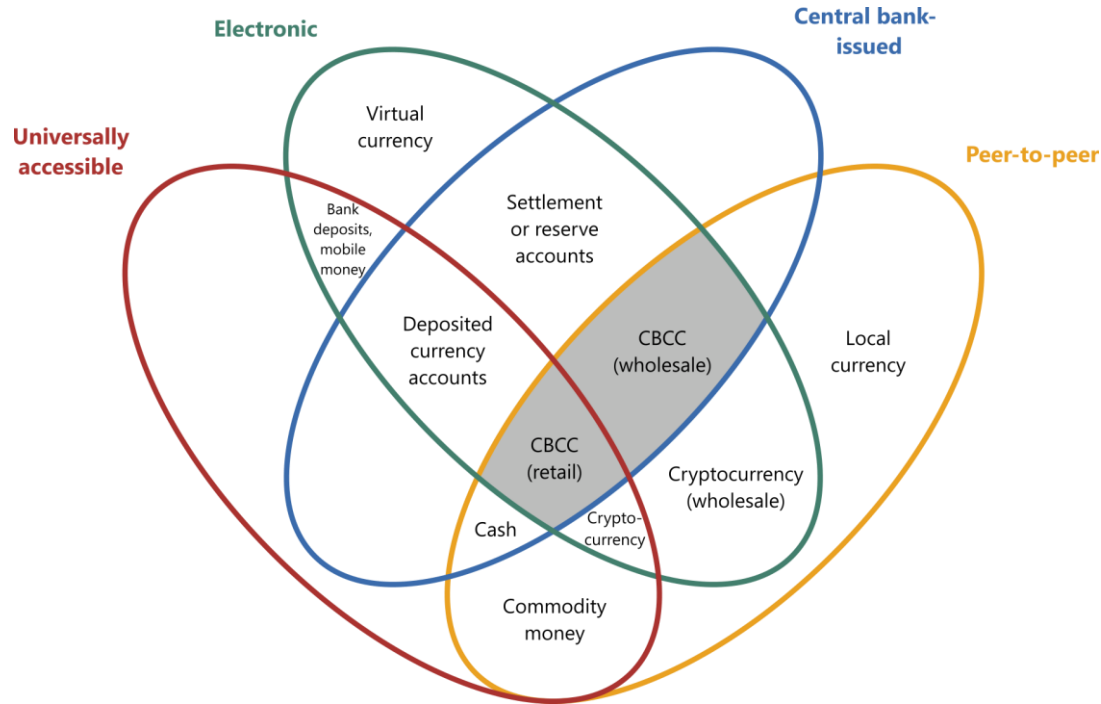


## 2. Digital currencies: overview

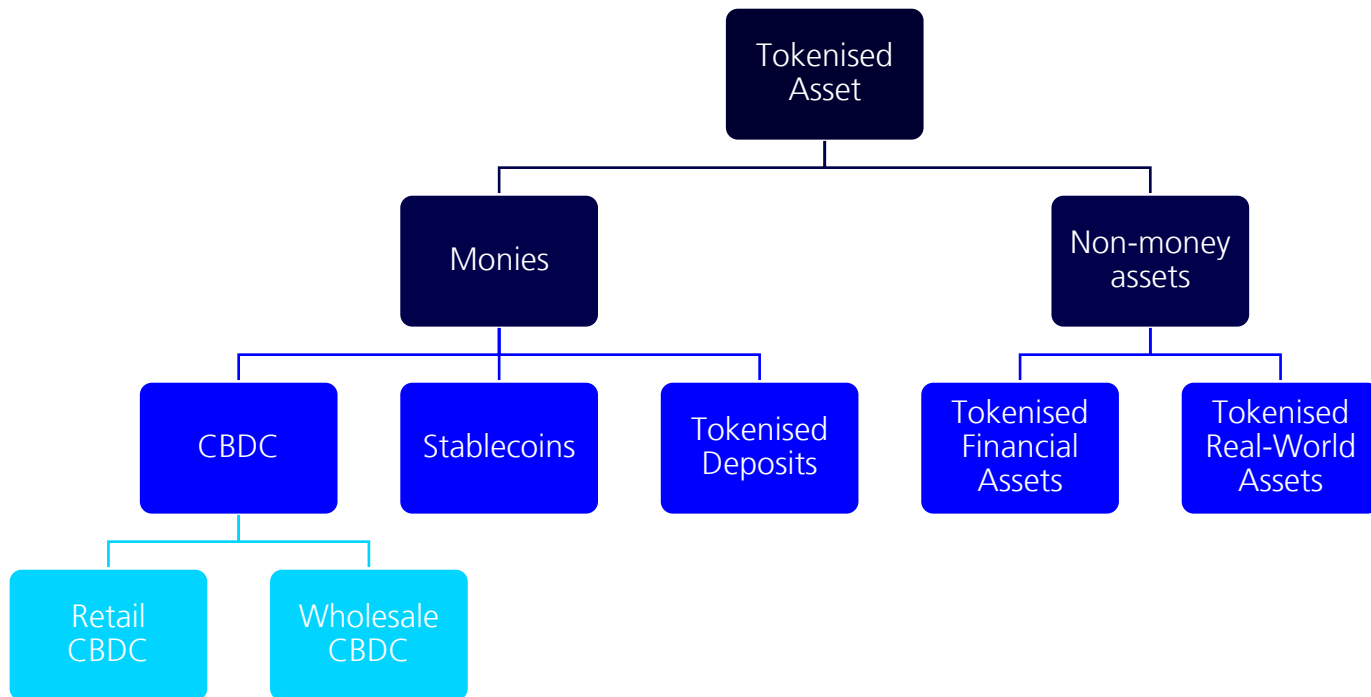




# The "money flower"



# A simple classification



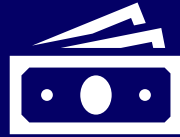


### 3. Central bank digital currency



# Central Bank Digital Currency

Issued by the  
central bank



Banknotes



CBDC



Bank deposits  
and e-money

Digital money

# The move towards CBDC is gaining momentum

91%

of central banks  
worldwide are actively  
engaged in CBDC work

67%

are experimenting and/or  
running pilots

89%

of adv. economies work on  
both retail & wholesale

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CBDCs progressed in tandem with regulations  
for stablecoins and other cryptoassets

**Central  
Bank  
Digital  
Currency**

**Distributed  
Ledger  
Technology**

The background of the slide features a collage of Botswana banknotes. A magnifying glass is positioned over a section of the notes, focusing on an illustration of a doctor in a white coat using a stethoscope on two young children. The text "Will CBDC run on DLT?" is overlaid in a dark blue box at the top left.

# Will CBDC run on DLT?

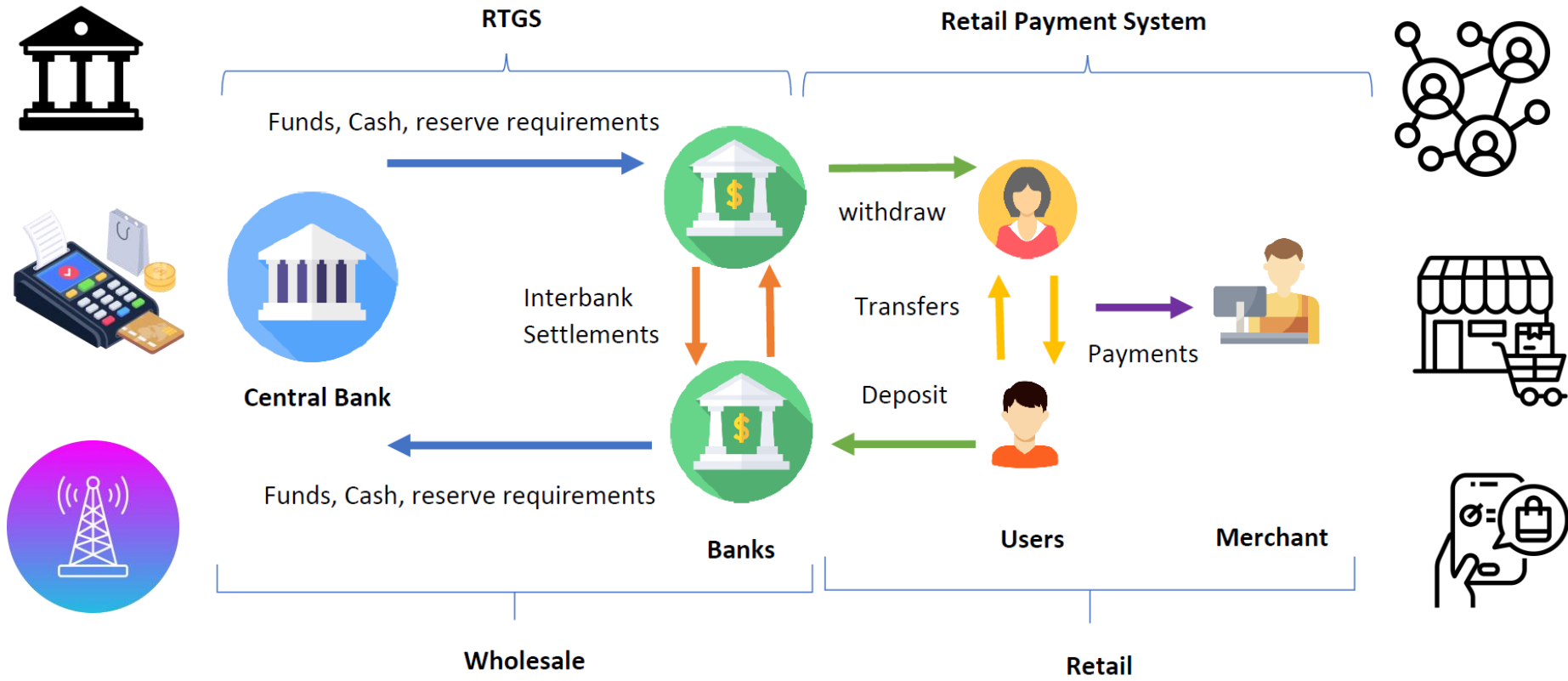
The background of the slide features a collage of Botswana banknotes. A magnifying glass is positioned over a section of the notes, focusing on an illustration of a doctor in a white coat using a stethoscope on two young children. The text "Does it matter?" is overlaid in a dark blue box at the bottom right.

## Does it matter?



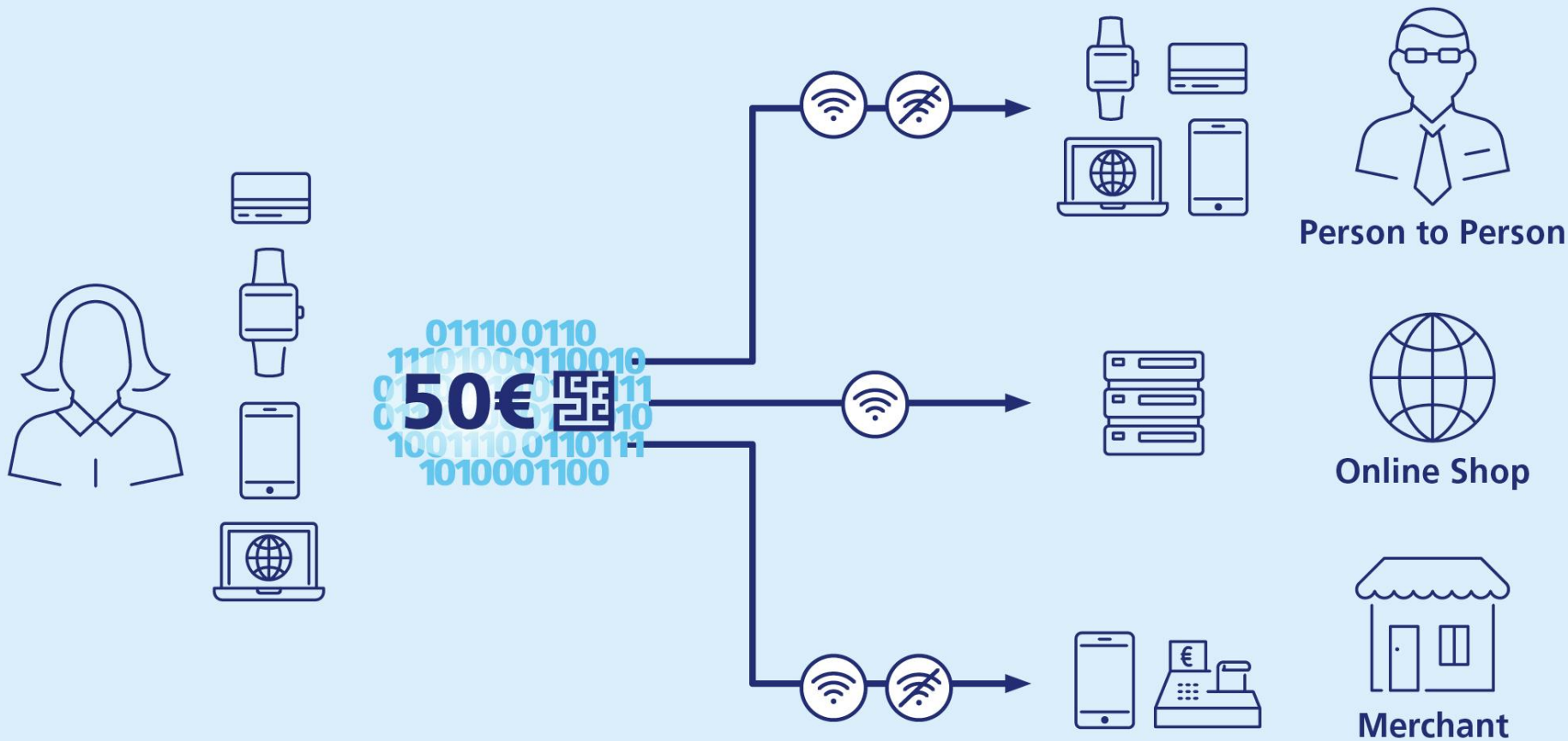
Giesecke+Devrient  
Creating Confidence







## 3.1. Retail CBDC





Seamless integration of on- and offline payments



Re-spendable offline transactions



Highest security and resilience



Balancing privacy versus transparency

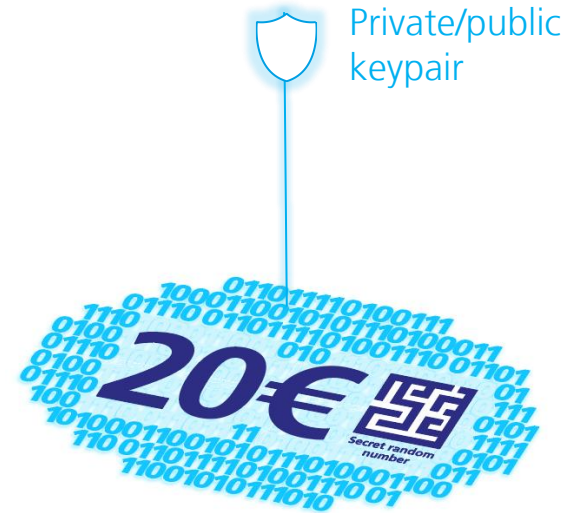
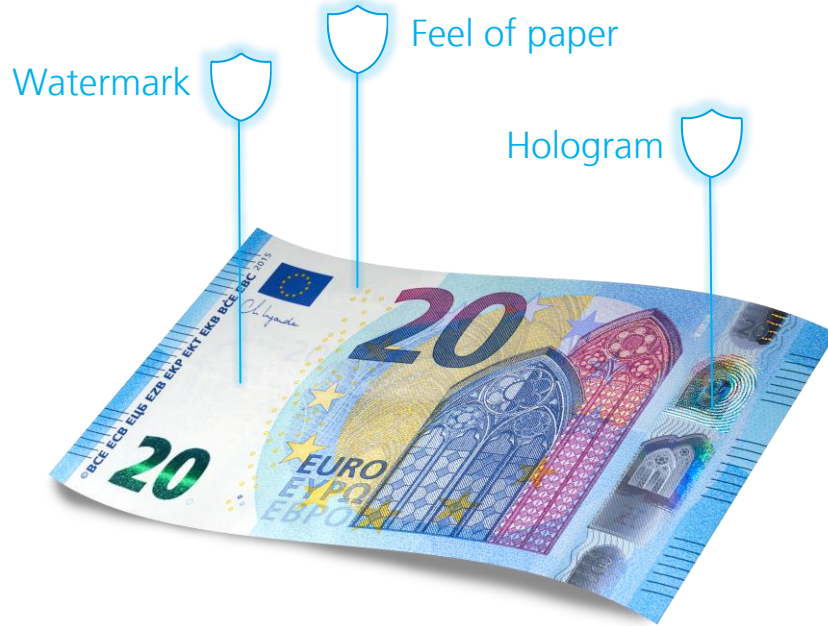


Foundation for innovative solutions

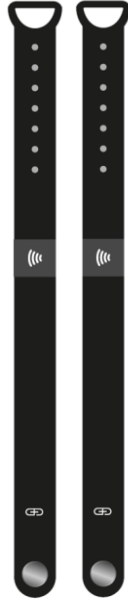


Production level performance

# Modelling digital cash after physical cash



# Wallet form factors





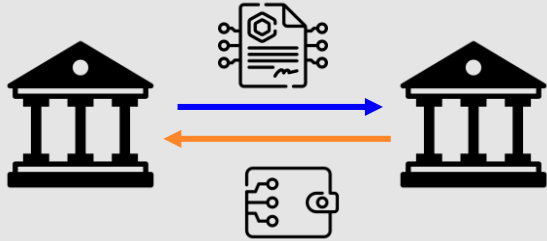


## 3.2. Wholesale CBDC

# Potential use cases



Interbank settlements

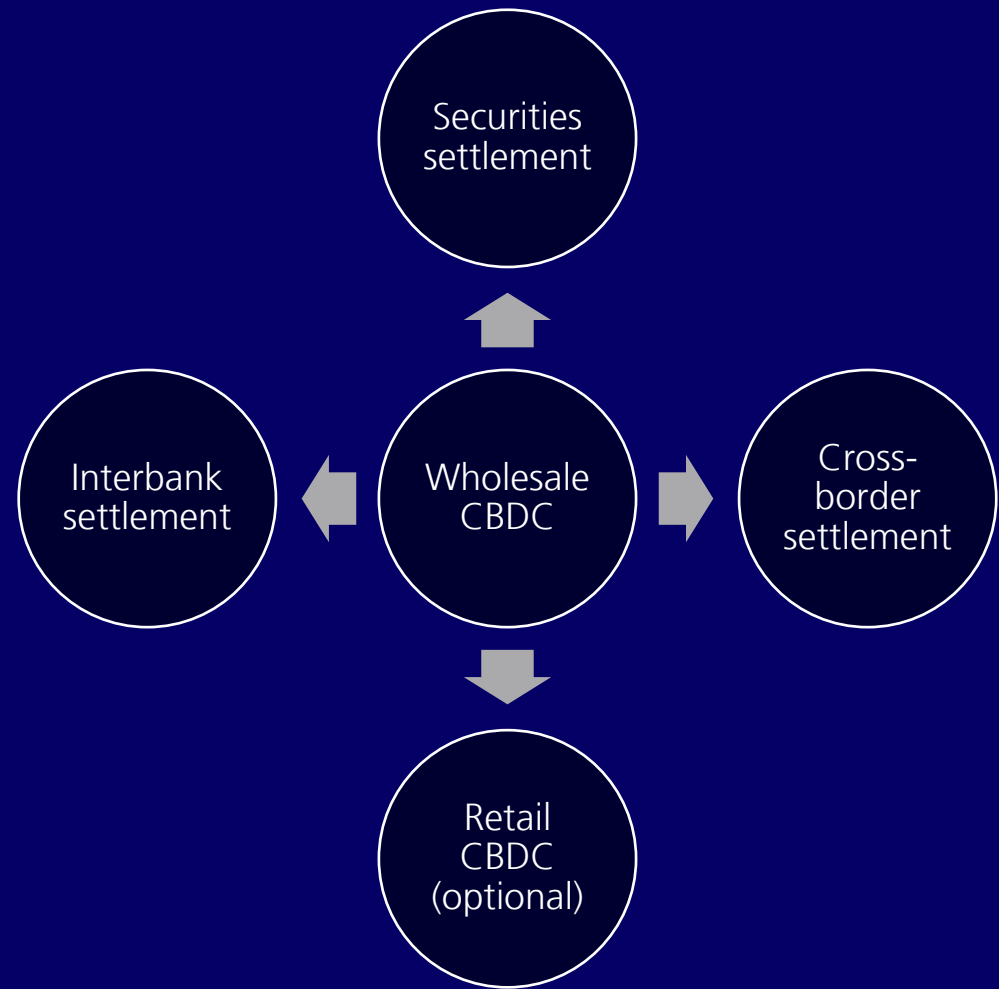


Securities settlements (DvP)



Cross-border settlements (PvP)

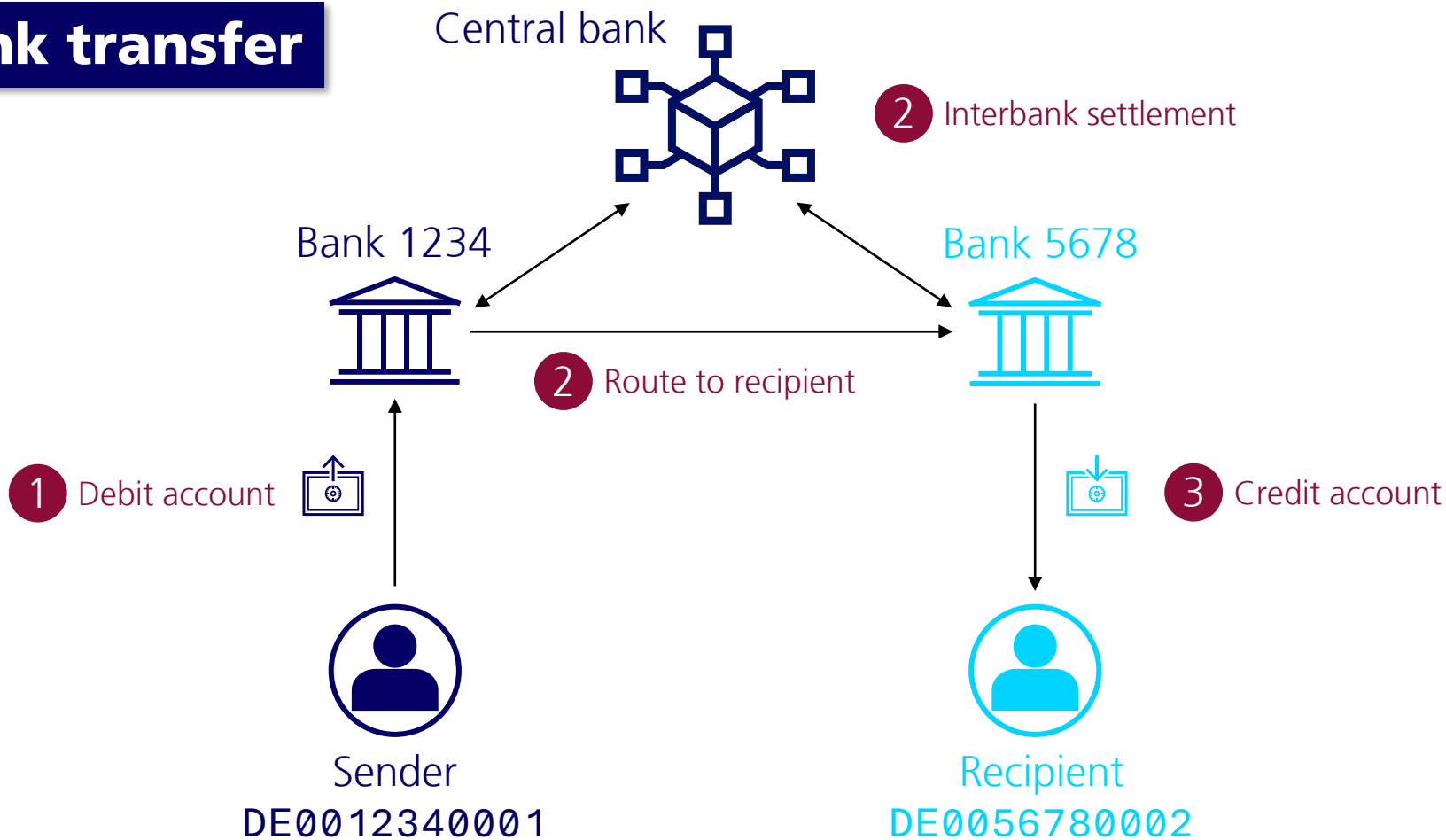
# Wholesale CBDC as the center of a tokenized financial ecosystem





## 4. Tokenised deposits

# Bank transfer





## 5. Stablecoins



# Questions? Answers!

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