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CENTRAL BANK DIGITAL CURRENCIES

A New Challenge for Banking

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Executive summary

CBDCs are Central Bank-issued instruments that combine cryptography and DLTs to achieve four possible goals:

- 1** Improve interbank settlement
- 2** Digitize cash to improve efficiency in payments
- 3** Develop a new monetary policy tool to overcome zero-bound interest rates
- 4** Increase surveillance and reduce financial system instability

Three basic parameters define CBDCs:

Access

Anonymity

Yield

Impacts on financial services might range from improved efficiency to total disruption of financial intermediation

The probability of a truly disruptive scenario is low in the foreseeable future, but should not be completely discarded

Cash characteristics can now be digitally replicated and modified

Cash

P2P

Universal

Anonymous

Non Yield Bearing

CBDC













P2P

Universal OR **Restricted**

Anonymous OR **Identified**

Non Yield Bearing OR **Yield Bearing**

Four design options lead to four main scenarios

A	CBDC for interbank settlement	 Restricted	 Identified	 Non yield-bearing
<p>➤ Centralized CB ledger is substituted by a distributed ledger to improve wholesale payments</p>				
B	CBDC similar to cash	 Universal	 Anonymous	 Non yield-bearing
<p>➤ CBDC reduces cash management issues and improves efficiency in payments</p>				
C	CBDC as new policy tool	 Universal	 Anonymous	 Yield-bearing
<p>➤ A yield-bearing CBDC allows CB to overcome zero-bound interest rates</p>				
D	CBDC as public deposit in CB	 Universal	 Identified	 Non yield-bearing
<p>➤ An identified CBDC increases surveillance and reduces financial system instability</p>				

...with different degrees of disruption and probability

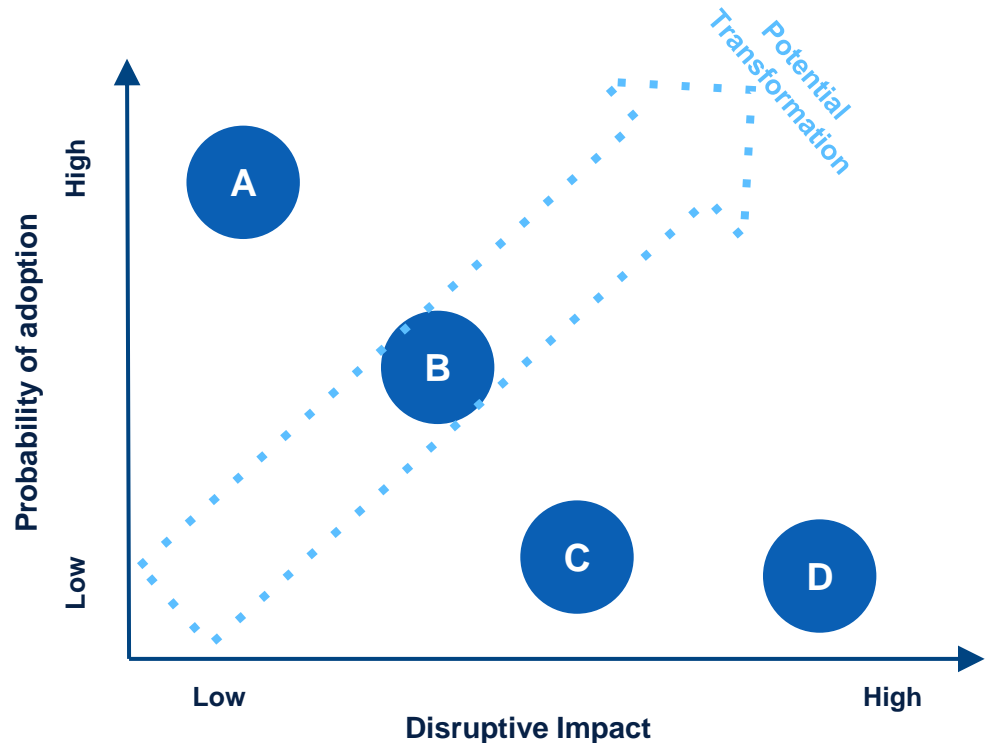
	A	B	C	D
	CBDC for interbank settlement	CBDC similar to cash	CBDC as new policy tool	CBDC as public deposit in CB
Issue Addressed	Efficiency, transparency, resilience and lack of competition in wholesale payment systems.	Cash is costly and burdensome to manage, and private digital currencies are emerging.	Lack of flexibility in monetary policies due to the existence of cash.	Financial instability as a result of banks double role as providers of deposits and credit
Expected Outcome	<ul style="list-style-type: none"> Improvement of efficiency in wholesale market Lower infrastructure management costs for the CB Reduction of barriers to entry opens participation to PSPs (perhaps corporates) 	<ul style="list-style-type: none"> Improvement of efficiency in retail payments (P2P) Infrastructure to be provided by CB. Obligation to have an account in the CB? Risk to increase informality and cause deposits and credit to fall 	<ul style="list-style-type: none"> (Same as in Scenario B) Negative interest rates imply capital controls to avoid flight to other assets Cash is either banned by authorities or abandoned by end-users Financial repression 	<ul style="list-style-type: none"> (Same as in Scenario B) A safer currency and higher surveillance lead to more financial stability and lower informality Credit is extremely reduced unless CB redirects funds to the financial system
Key takeaway	<p>Probable scenario</p> <ul style="list-style-type: none"> net benefit to the market lack of large losers possibility of a DC crowding out by the private sector. 	<p>Probable scenario</p> <ul style="list-style-type: none"> convenience for end-users efficiency and competition with private digital currencies for CB informality would grow 	<p>Improbable scenario</p> <ul style="list-style-type: none"> legitimacy issues related to CBs, which could either impose financial repression or make fiscal policy 	<p>Improbable scenario</p> <ul style="list-style-type: none"> legitimacy issues related to CBs total disruption of the banking system

CONCLUSIONS

CBDCs can be seriously disruptive

- ◆ CBDC's introduction is **likely in a 5-year horizon for the less disruptive scenarios (A and B)**.
- ◆ CBs must be aware of the **serious disruption to the financial system** in scenarios B, C and, particularly, D
- ◆ CBs would probably move forward with **gradual testing and implementation**
- ◆ **Increased competition** from private DCs (Bitcoin) may lead CBs to move towards CBDCs. **First CB movers may increase the incentives for other CBs to follow**
- ◆ In the most disruptive scenarios there is a **trade-off between greater stability and lower credit** throughout the financial system. This could lead to a rise of new credit mechanisms provided by non-bank players (i.e. crowdfunding)

SCENARIOS: IMPACT AND LIKELIHOOD



- A** CBDC for interbank settlement
- B** CBDC similar to cash
- C** CBDC as policy tool
- D** CBDC as deposit in CB

A Latam perspective: Anonymity is key

A

CBDC for interbank settlement

- ◆ Adoption depends on a **tech issue**: is CBDC a better technology than current payment systems?
- ◆ Higher probability of adoption where payment system are less efficient (Latam?)

B

Anonymous CBDC: similar to cash

- ◆ Interesting tool to increase both **financial inclusion and efficiency** (including lower currency management costs for CBs) in Latam...
- ◆ ... but may consolidate high **informality** (if credible) or **fail** (if not credible)

C

CBDC as new policy tool

- ◆ **Less helpful in Latam** than in industrial countries (deflation and ZLB constraint are not big issues in the regions)

D

Non-anonymous CBDC: public deposit in CB

- ◆ A great trade off: mechanism to **reduce informality** with potentially very **negative effects on bancarization**

Dollarization: a factor to take into account – cryptocurrencies potential

Thanks!

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