Digital Payments: Regulation and /or Private Provision

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Meetings of the Heads of Payments and Infrastructure

CEMLA, Bank of Spain, September 2021

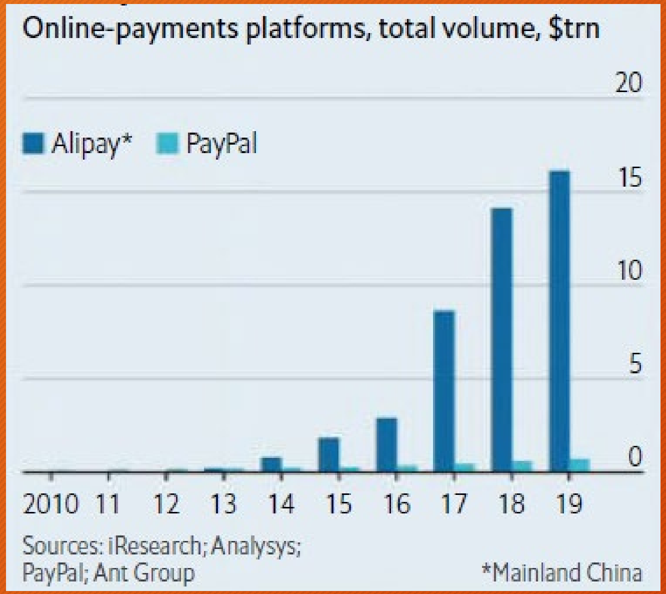
MOTIVATION

- Digitalization is revolutionizing our economies.
- The volume of digital payments has increased exponentially, fueled by electronic commerce and financial transactions. Giant internet platforms are now dominant players at the global level.
- New Payment Service Providers are undermining the traditional business model of banks.
- We lack a conceptual framework for guiding the regulatory reforms that are needed to adapt to this digital revolution.

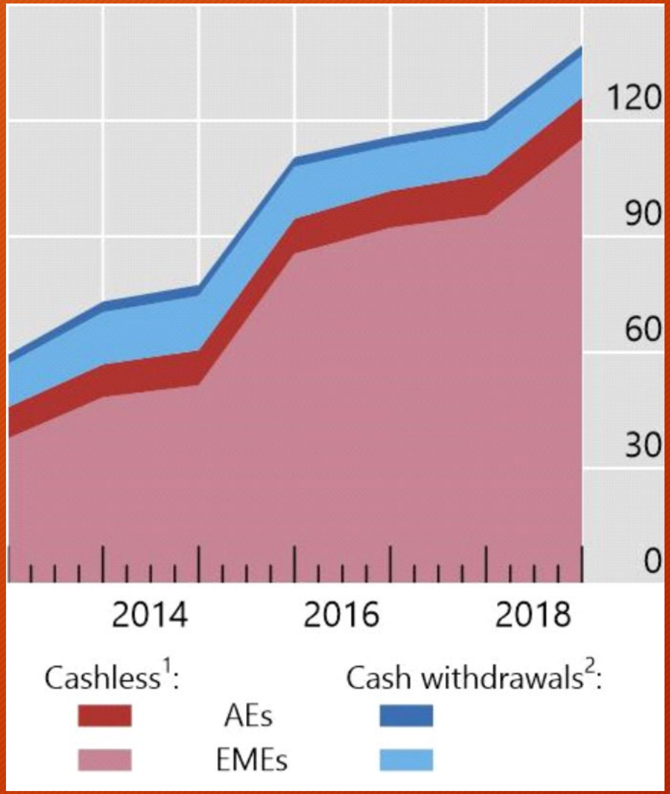
Technology determines payment instruments

Volume of retail payments increases fast (BIS 2021)

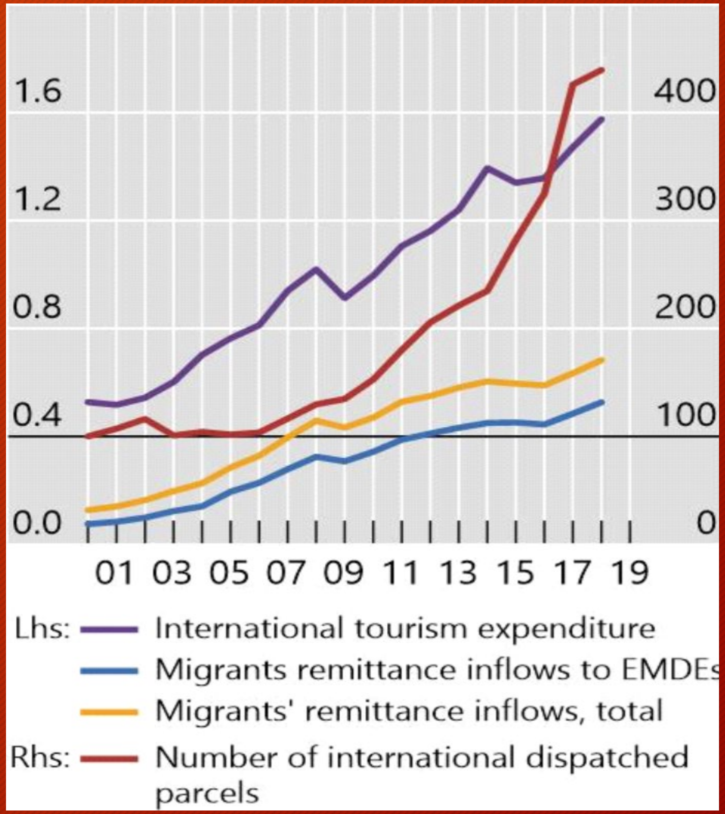
Alipay vs Paypal



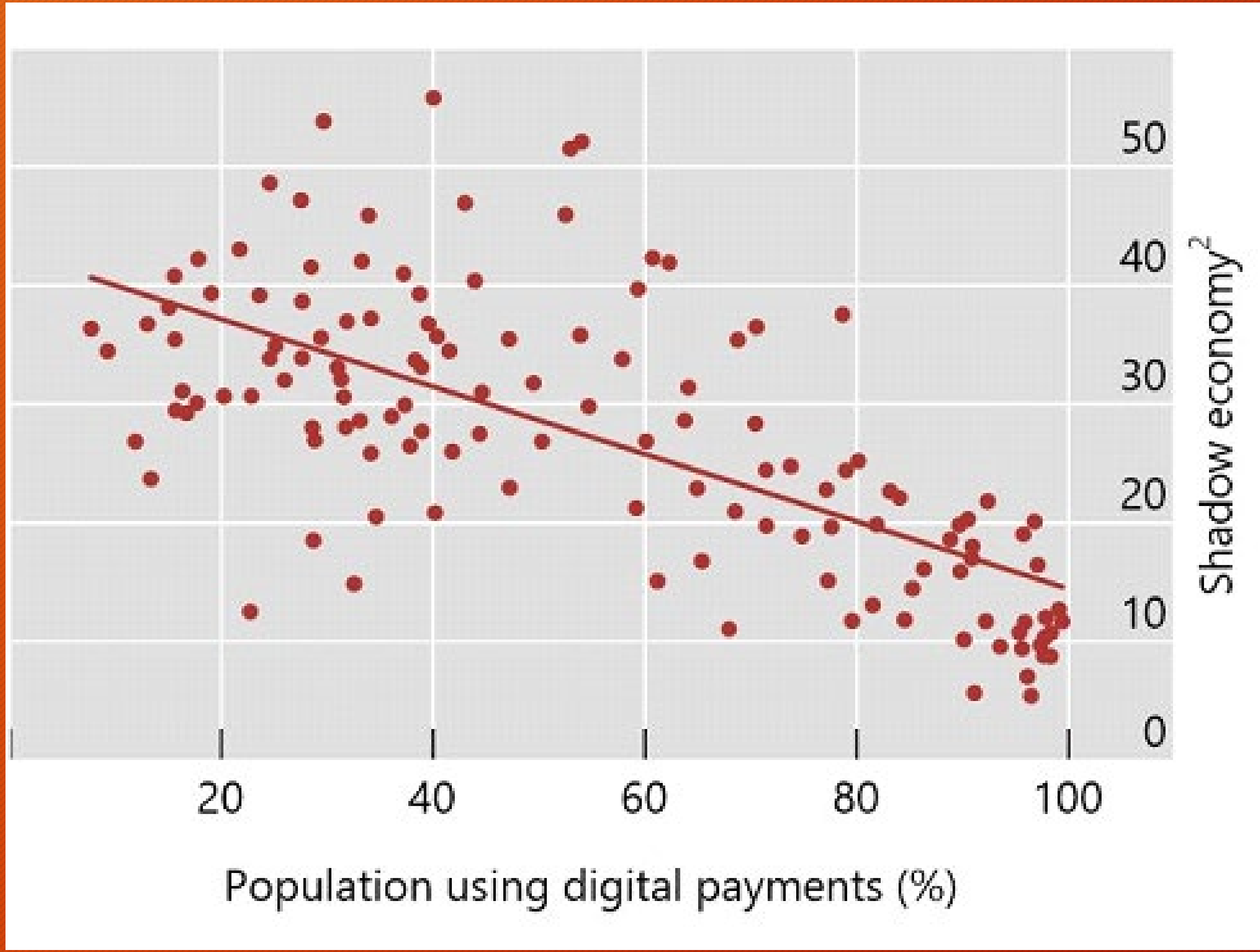
Cash vs cashless



Cross-border payments



Digital payments can help formalizing the informal economy (BIS 2021)



A Two-Tiered Payment System

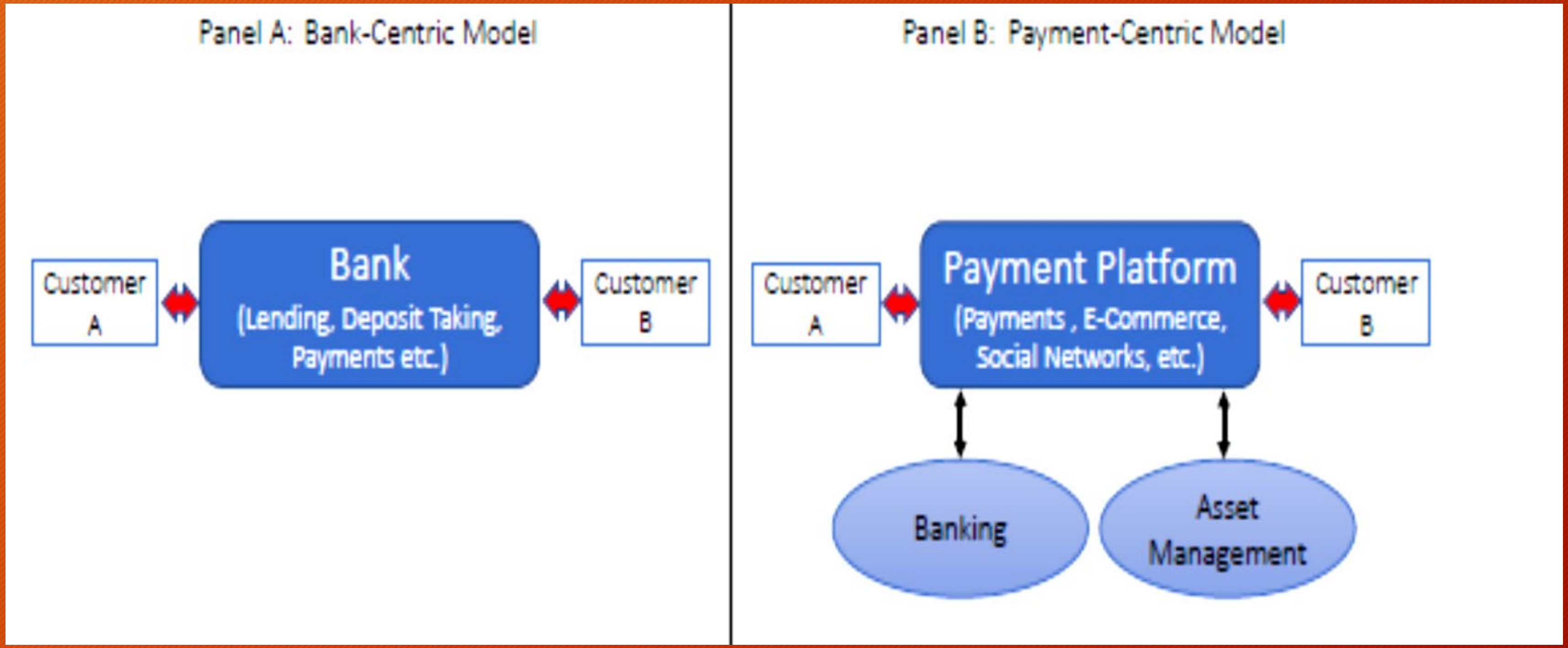
- Current situation: banks manage the payments of firms and households, and provide credit to firms, while the central bank manages interbank payments and the reserves of the banks.
- This system is a Public Private Partnership.
- It is being undermined by the entry of new players: Fintech PSPs and BigTech platforms that bundle payment services with other services, such as e-commerce (Amazon, Alibaba) or social networking (Facebook, WeChat).

New players in the payment industry

- New entities (FinTech, BigTech) are competing with banks to provide new digital payment solutions – and incumbents are adapting.
- WeChat’s and Alipay’s digital wallets dominate the Chinese payments industry.
- Safaricom’s M-Pesa offers successful money transfer services to unbanked customers in Africa.
- Facebook will be launching its stablecoin DIEM (formerly LIBRA).
- Covid-19 is accelerating the move to digital payments.

Technology is disrupting payment markets

FinTechs and BigTechs are destroying the traditional business model of banks (Brunnermeier et al.2019)



Fintech challengers are unbundling the services of universal banks

Main concerns: cryptocurrencies and stablecoins

- Entry of new players: efficiency gains, improves financial inclusion.
- But the rise of cryptocurrencies: threat to monopoly of money creation by central banks and to monetary sovereignty of governments: source of instability.
- Moreover payment markets may also “tip” in favor of a few dominant platforms. This is a major source of antitrust issues and data privacy concerns.

Platform Economics 101

Platforms allow interactions between several types of users

User 1 → Platform ← User 2

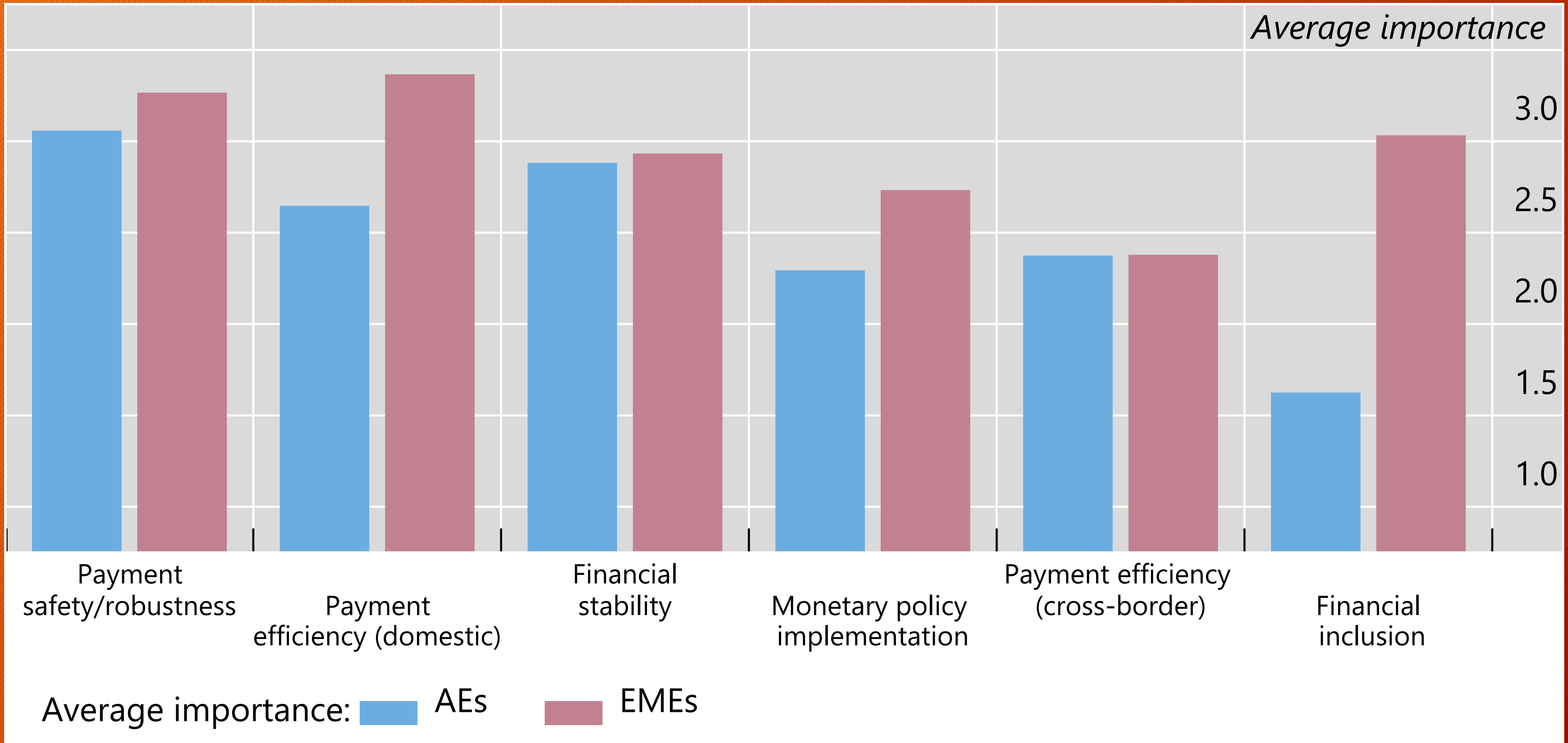
User 1	Platform	User 2
Card holder	Card network	Merchant
Viewer	Media	Advertiser
Consumer	Trading	Producer

Who pays for the service?
Platforms typically select **skewed price structures.**
Economies of scope, of scale and network externalities: giant firms.
Need for new type of regulation.

Digital Currency Areas (Brunnemeier et al.2019)

- Ant Group sees itself as a "lifestyle platform" on which people conduct most of their life's transactions, from ordering food, buying movie tickets, to paying utility bills.
- FinTechs unbundle payment and credit.
- BigTechs rebundle them with other services (e-commerce, social media)
- Threat that Digital Currency Areas replace monetary unions.
- CBDCs: way for governments not to lose the control of currency?

Motivations for issuing a retail CBDC (BIS 2021)



Academic Research on CBDCs

- Already a sizable academic literature on CBDCs.
- But mostly focused on their implications for money and credit.
- Does not consider two-sided aspects: indirect network externalities
- Is a CBDC the only way for public authorities to avoid the take-over of money and payments by a small number of BigTech platforms?
- We need to understand the **new economies of scope** between payments and other services such as e-commerce and social media.

Scope Economies and Market Power

- In close knit communities, payments were enforced by «social accounting»
- In some way, social media recreate such communities: if we are both on Facebook, why use banks to tranfer payments?
- Risk is obvious: once payments (and data) are managed by an internet giant, it maybe difficult for public authorities to regain control.
- Challenge: limiting market power, while allowing positive network externalities.

Regulators don’t know what to do with new payment service providers

Banks are regulated for financial stability reasons:

- They finance risky assets by insured deposits
- Prudential regulation limits default risk of each bank and systemic risk

FinTech and BigTech are non-banks: they do not transform deposits into loans. But they must be regulated for competition reasons:

- Economies of scale and scope: large market power
- Network and Platform externalities: market failures

Need for a clear doctrine for regulating non-banks payment providers: why, how and by whom?

The reasons for intervening on payments

- A **payment system** is a set of arrangements for facilitating trade between economic agents.
- An **inclusive, safe and efficient payment system** is **essential** for a modern economy to function properly.
- In many countries, the currency issued by the Central Bank is the sole **legal tender**.
- The Central Bank is mandated to ensure the **stability of the currency** and the **continuity and proper functioning of the payment system**.

The payment system is a PPP

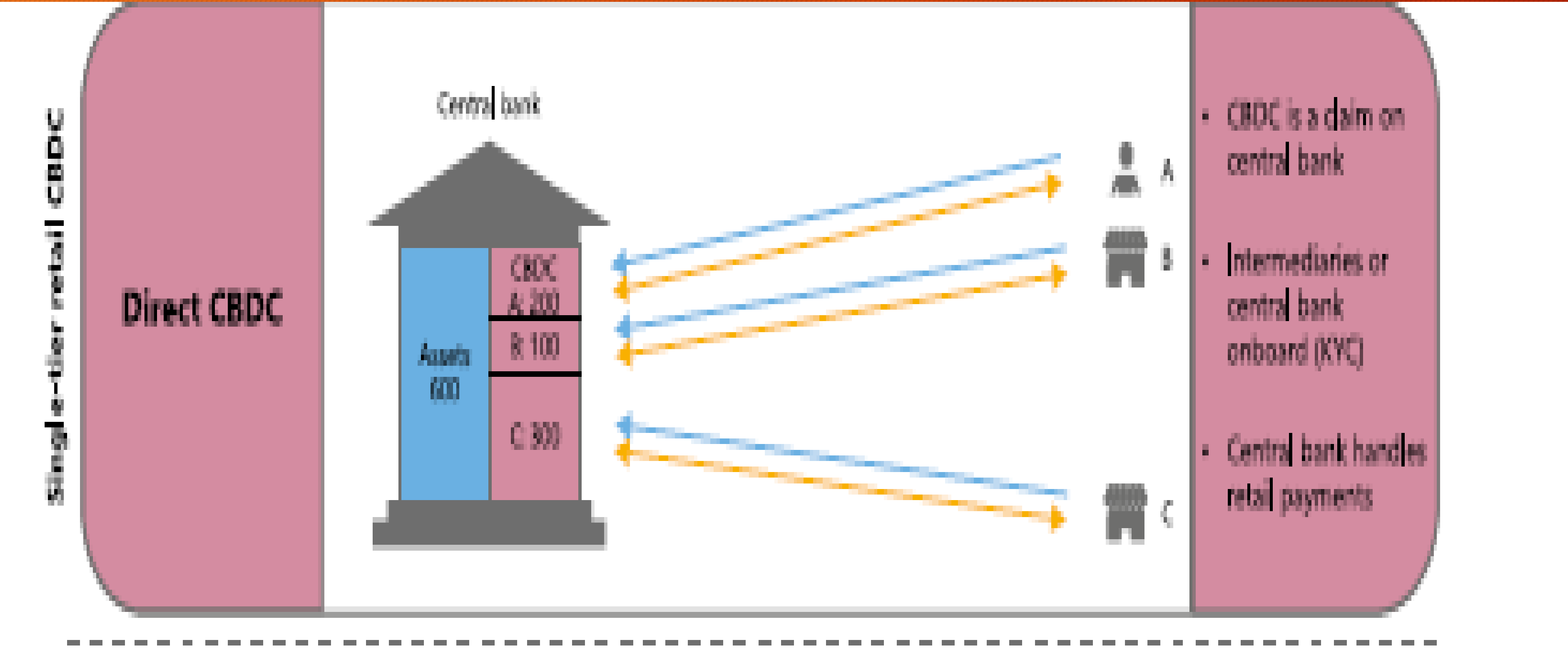
Public Private Partnerships are not uncommun on **other network industries** and goods that generate **externalities:**

- Private doctors and hospitals participate in the provision of Public Health as agents of the government.
- Private schools and universities are delegated the provision of Public Education, together with public schools.
- Public transportation is jointly provided.
- The current tiered system is indeed a PPP and should not be jeopardized by a CBDC.

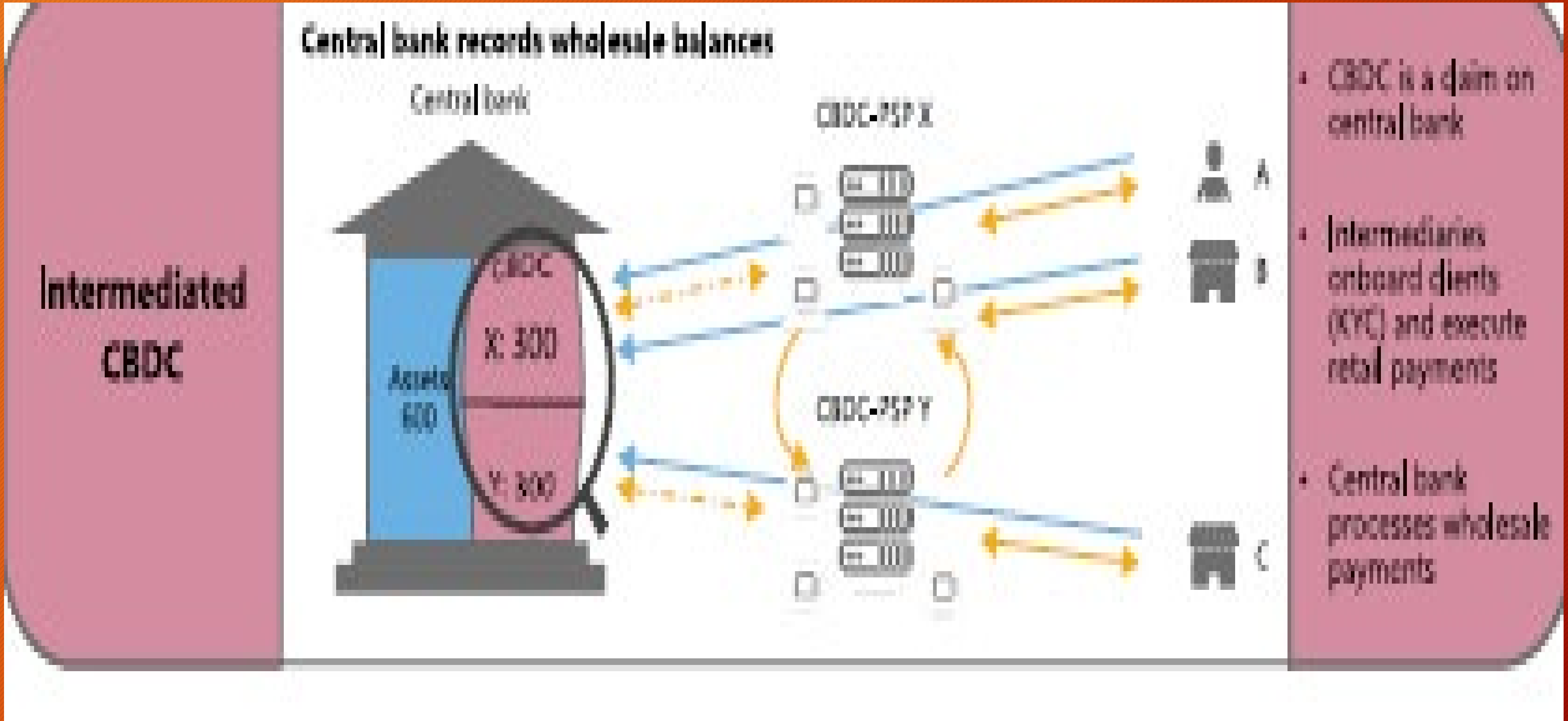
CBDC vs private money

- Sovereign money: CBDC would be risk-free for users.
- Could increase seignorage revenue of government.
- But might deprive banks from a cheap source of funding.
- CBDC would improve access of non banked customers to digital payments and financial services.
- But it may provoke a digital bank run.
- Could improve monetary policy efficiency: relaxes the zero lower bound and allows helicopter money.
- Could improve fighting against crime and terrorism.

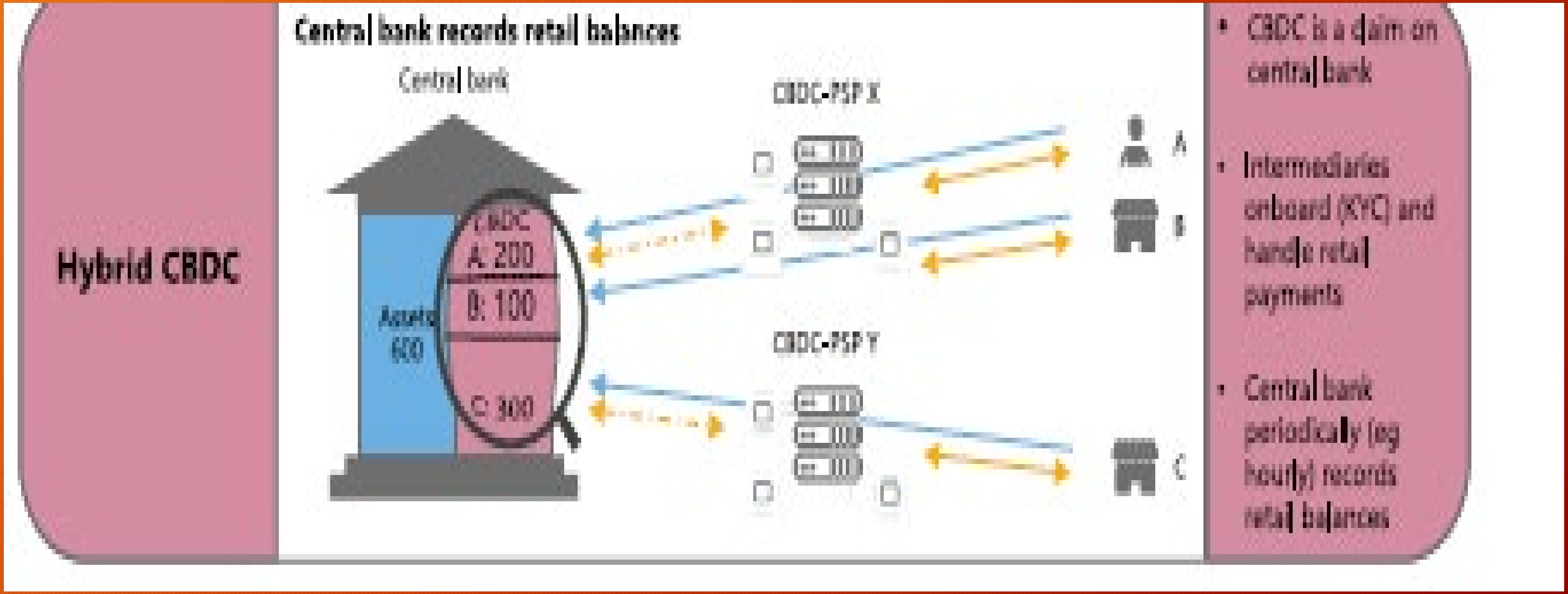
Architecture 1: Direct CBDC (source: BIS 2021)



Architecture 2: Intermediated CBDC



Architecture 3: Hybrid CBDC



The water and the pipes

The water:

- public versus private provision of liquidity.
- Stable unit of account= public good.
- Delegation of monetary policy to an independent CB.
- But private banks also create money: prudential regulation.

The pipes:

- Efficient and resilient payments system: indispensable public good.
- Economies of scale, scope, two sidedness: competition does not work well.

A doctrine for public intervention in payments?

Private vs public supply of liquidity

- Competition between private monies leads to instability: should we (can we) ban cryptocurrencies?
- Government has a comparative advantage over the private sector for providing money.
- Holmstrom and Tirole (1998): taxation power gives it a superior technology for creating collateral in states where private sector collateral may not be available (crises) .
- But Rochet and Tirole (1996): central bank involvement in payment systems may introduce a too-big to fail problem, diluting banks'incentives to monitor counterparties.

A doctrine for public intervention in payments(2)

Market failures:

- A universal payments system is a public good: has to be controlled by the State.
- However, its operation can be delegated to private firms: banks and PSPs. Same for railroads: network is public but trains can be operated by private entities.
- Banks also provide credit: financial stability issues.
- PSPs may also provide ancillary services.
- Competition works badly: government has to stimulate it while maintaining the safety and soundness of the system.

Competitive Neutrality in a Mixed Oligopoly

- With a CBDC, the payment system becomes a «mixed oligopoly»
- The Central Bank plays two parts: provider of payment services and overseer of the the system
- How to ensure competitive neutrality?

Two ingredients:

- Minimum involvement (hybrid system)
- Supervision by a Payment Service Committee comprising representatives of Competition Authority, Ministry of Finance, and Central Bank.