CBDC IN THE RAPIDLY EVOLVING PAYMENT SYSTEM LANDSCAPE

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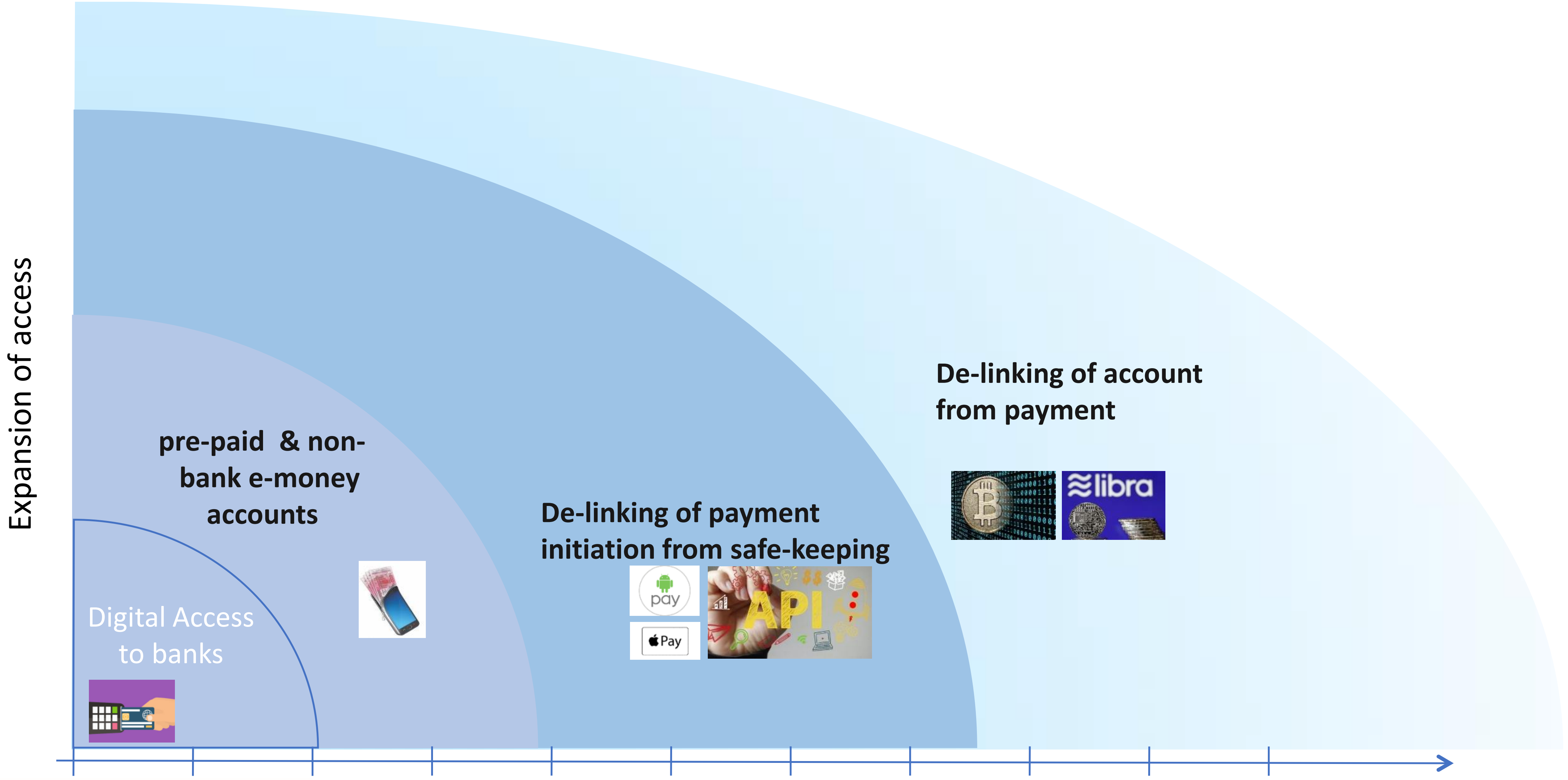
WORLD BANK

AGENDA

- Historical perspective on linkage between payment and account
- Enter CBDCs – why and how
- Perspective of CBs on CBDCs
- Risks
- Will CBDCs support financial inclusion?
- Conclusion

4th Wave of innovations in payment-account linkage



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Why a Central Bank could be interested in CBDCs? How would it be done?

DLT can be used to enable Central Banks to issue digital variants of fiat currency enabling transactions on P2P basis - CBDC

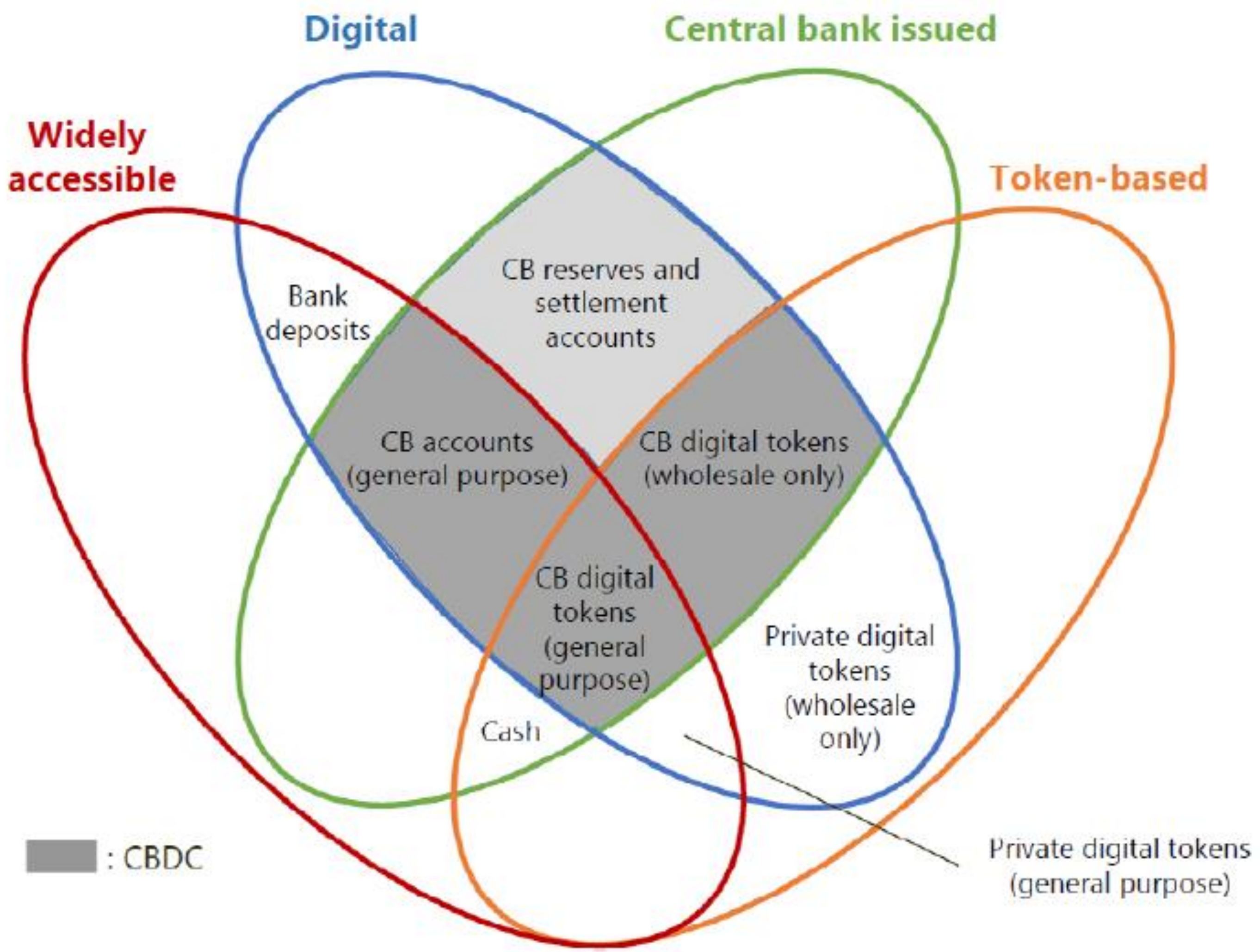
Motivations & Opportunities

- **Settlement Asset for decentralized financial infrastructures**
- **Universal payment mechanism in a cashless economy**
- **Internet of Things (IoT) payments (automated M2M payments)**
- **Cross-border payments**
- **Programmability of Money**
- **Additional monetary policy tools:**
  - **Makes negative interest rates possible**
  - **Direct monetary expansion directly to real sector without bank intermediation**

Different Models of CBDCs

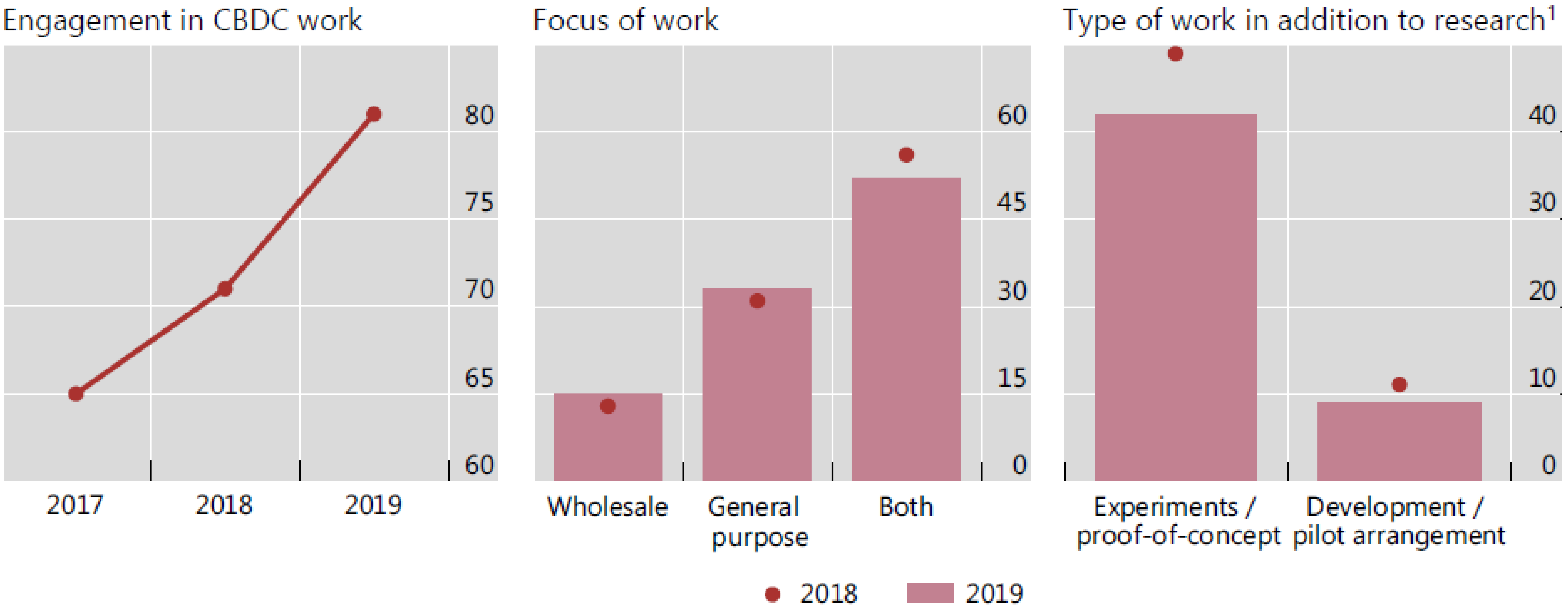
Account-based	↔	**Value-based**
Individuals directly open accounts at the Central Bank (Referred to as Deposited Currency Accounts by Tobin in 1987)		Central Bank issues CBDC through financial intermediaries
Wholesale	↔	**Retail**
Issued only to financial institutions		Issued also to individuals and businesses

Money Flower



Source: Bech and Garratt, BIS

CBDC Pilots

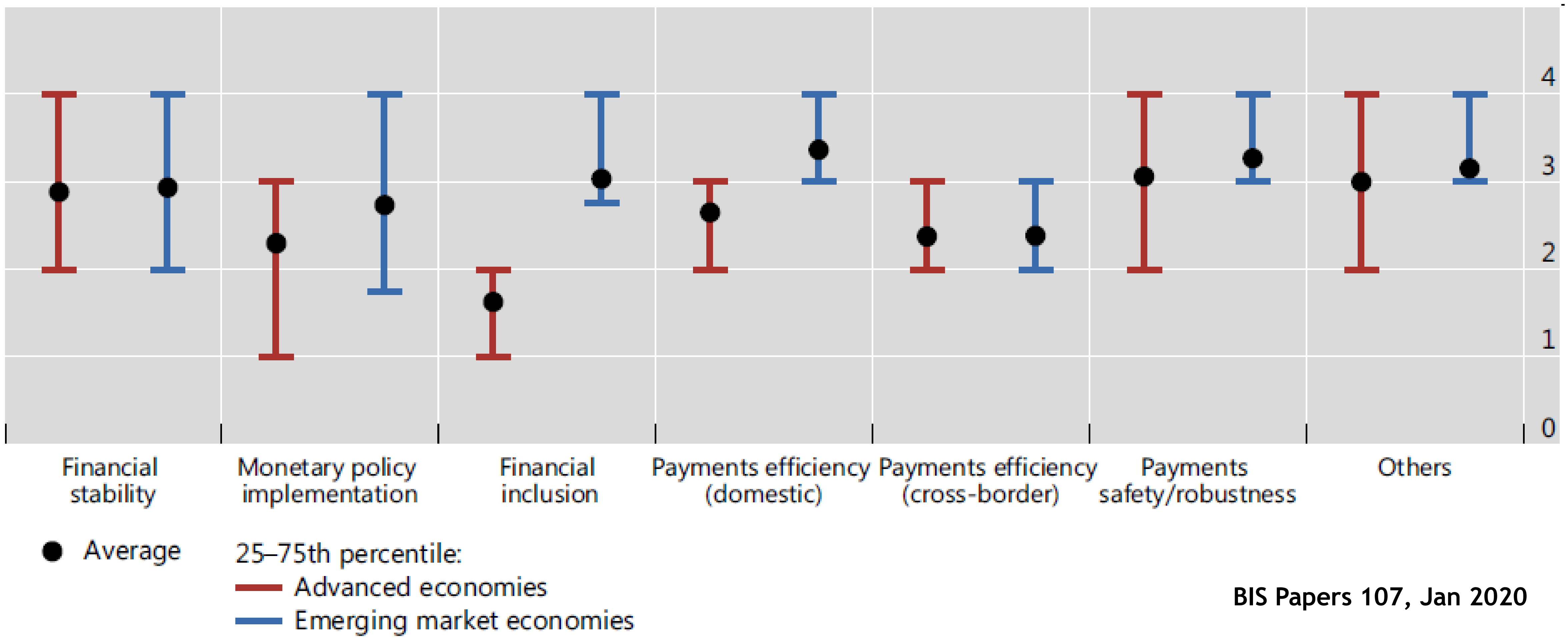


[1] Share of respondents conducting work on CBDC.

Source: Central bank survey on CBDCs.

BIS Papers 107, Jan 2020

Motivations for General purpose CBDC



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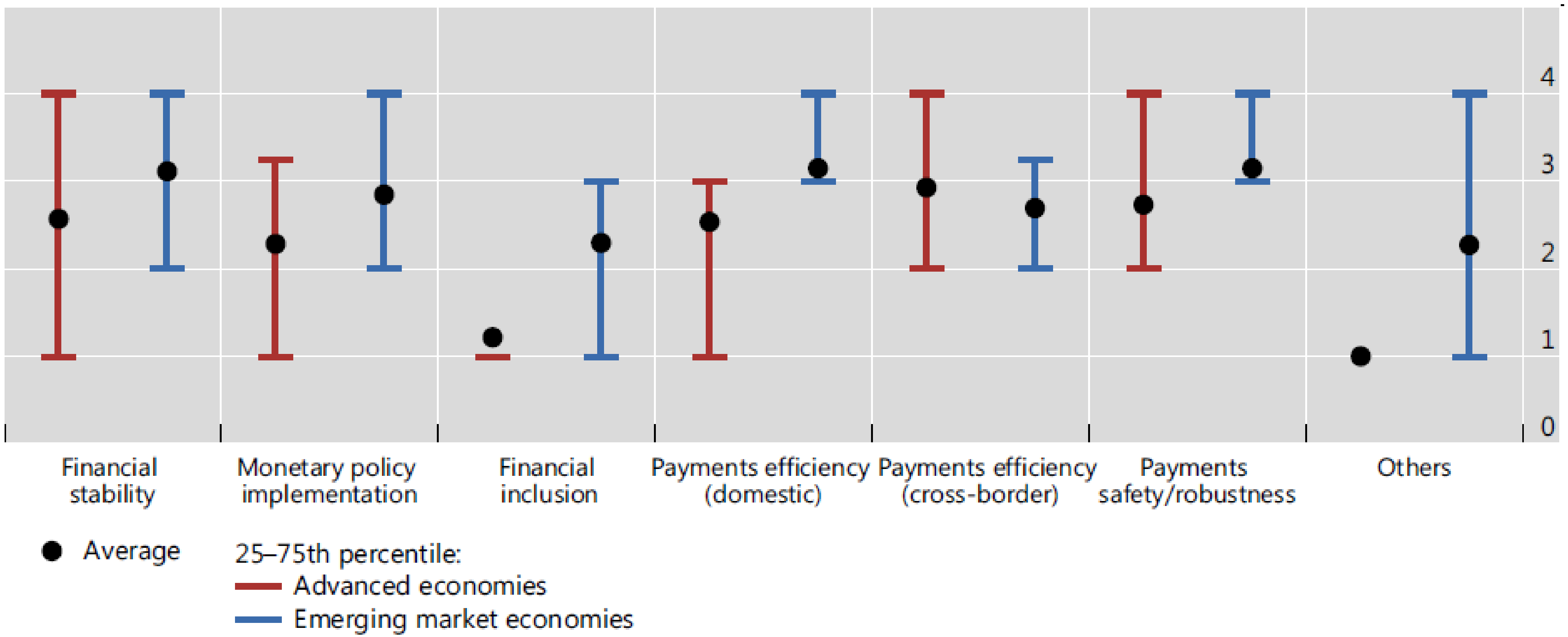
[1] Not so important" (1); "Somewhat important" (2); "Important" (3); and "Very important" (4).

Motivations for Wholesale CBDC



[1] Not so important" (1); "Somewhat important" (2); "Important" (3); and "Very important" (4).

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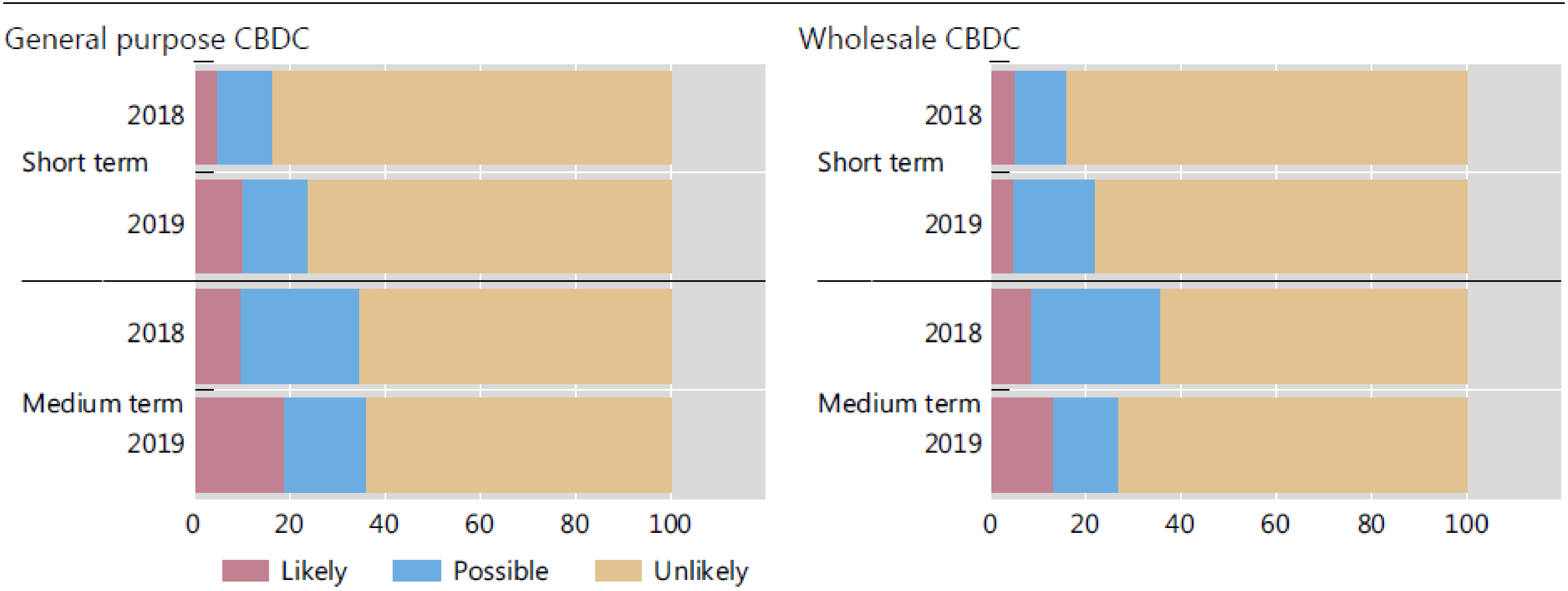
Future Plans for CBDC



Short term: 1–3 years and medium term: 1–6 years. “Likely” combines “very likely” and “somewhat likely”. “Unlikely” combines “very unlikely” and “somewhat unlikely”.

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Future plans for CBDC

	Global	High income	Upper middle income	Lower middle income	Low income	Europe & Central Asia	Latin America & Caribbean	Sub-Saharan Africa	High income OECD	East Asia & Pacific	Middle East & North Africa	South Asia
The issue is still under study, no decision has been made yet	54% 59 /110	57% 23 /40	47% 16 /34	57% 16 /28	50% 4 /8	65% 11 /17	43% 9 /21	65% 11 /17	48% 15 /31	64% 7 /11	50% 4 /8	40% 2 /5
No, the issue has never been studied	32% 35 /110	23% 9 /40	38% 13 /34	32% 9 /28	50% 4 /8	29% 5 /17	43% 9 /21	29% 5 /17	29% 9 /31	27% 3 /11	25% 2 /8	40% 2 /5
No, the issue has been studied and decision was not to issue Central Bank Cryptocurrency	15% 16 /110	20% 8 /40	15% 5 /34	11% 3 /28	0% 0 /8	6% 1 /17	14% 3 /21	6% 1 /17	23% 7 /31	9% 1 /11	25% 2 /8	20% 1 /5

0% 13% 26% 39% 52% 65%

Each box shows the percentage of answers among the juristictions in a group.
The number of jurisdictions in a group may differ across options.

World Bank GPSS, 2019

CBDCs could pose substantial risk

- Implications vary based on design and scope [whole-sale Vs retail]
  - Risks for whole-sale CBDC much lower

- Implications for role of commercial banks
  - Depository institutions?
  - Maturity transformation? Eliminate money creation role of banks?

- Implications for financial stability
  - CBDCs could accelerate bank runs
  - Increase in borrowing from central bank, as deposits become volatile
  - Implications on exchange controls and interest rate formation

- Implications for AML/KYC concerns
  - Pure value-based CBDCs present similar concerns to cash

- Implications for Global Monetary System

Speech by Mr Agustín Carstens, General Manager of the BIS, at the Central Bank of Ireland, 2019 Whitaker Lecture, Dublin, 22 March 2019.

The bitcoin hype is over but attempts to create new forms of money or to engineer new ways to pay still appear almost weekly. Central banks have entered the fray, with about 70 percent either exploring or experimenting with so-called central bank digital currencies (CBDCs). A CBDC would allow ordinary people and businesses to make payments electronically using money issued by the central bank. But what are the consequences of such a system? How would it differ from what we have now? ***As money and payments form the backbone of the financial system, central banks need to understand the full consequences of opening up the monetary system for major surgery. Hence, central banks are treading cautiously, and only a very few central banks think it is likely that they will issue a CBDC***.

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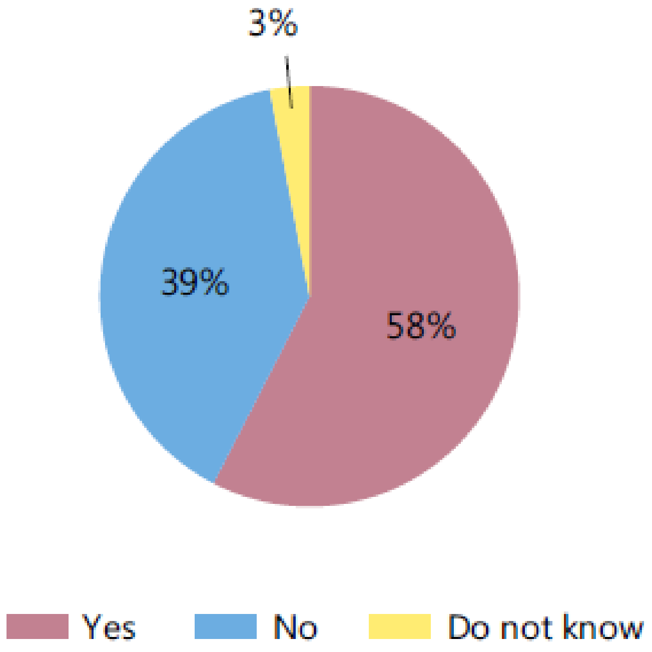
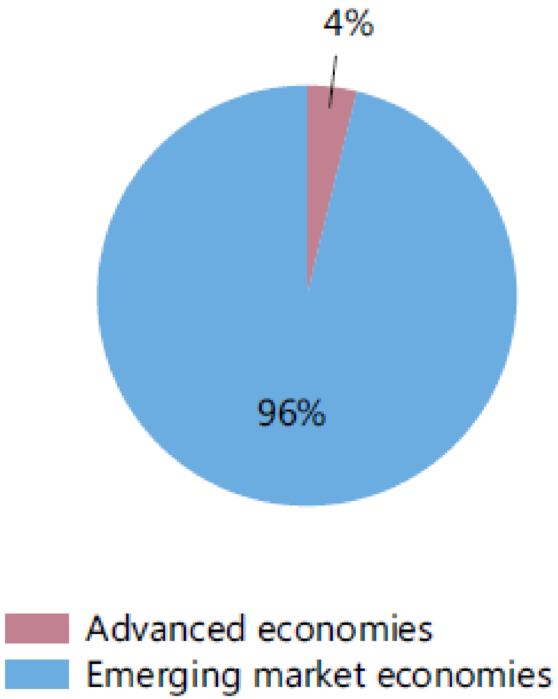
Central Bank attention to Global Stablecoin risks

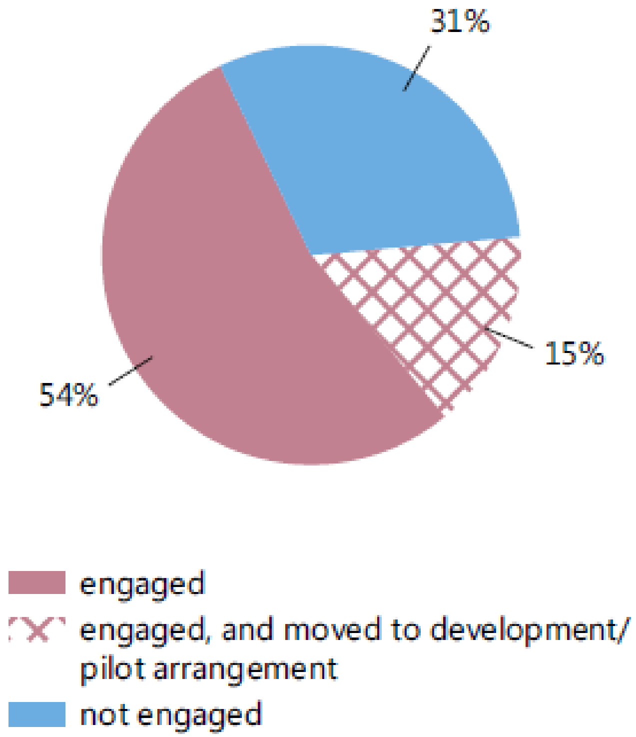
Are you analysing the potential impact on monetary and financial stability of stablecoins?



Central banks that responded "no"



Central banks that responded "no" (engagement in CBDC work)



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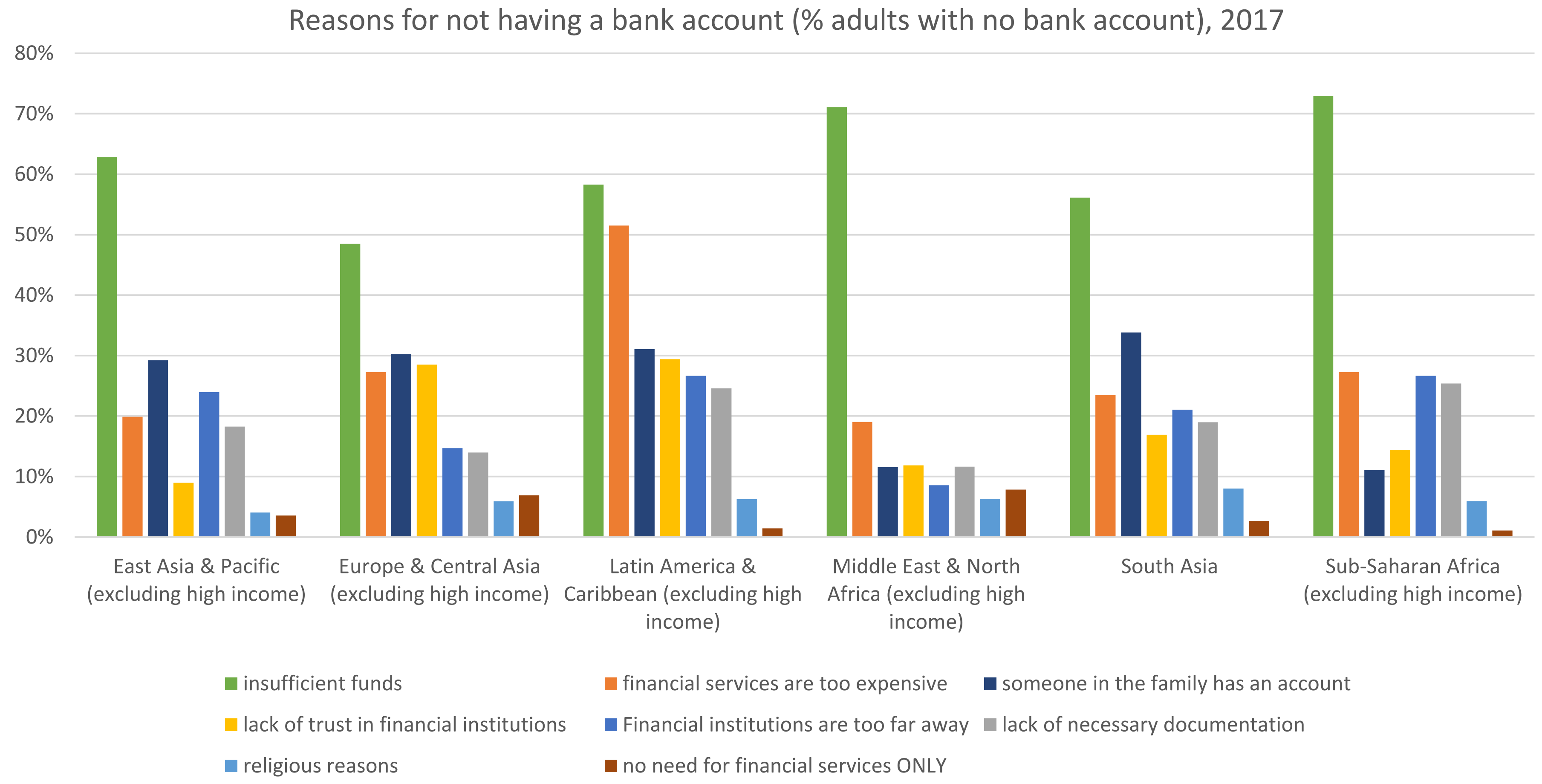
Which of these reasons for financial exclusion would CBDC address?



Source: Findex 2017, World Bank

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CBDC in the context of other innovations

Utility of CBDC in the context of rapid advances in payment systems needs to be assessed:

- Faster Payments
- SWIFT GPI
- Regional integration
- APIs

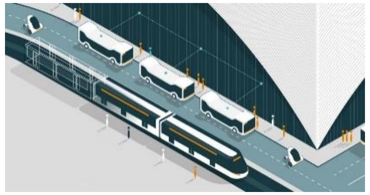
Changes in processing

Faster Payments

DLT

Integration with ID

QR codes



AADHAR

fido alliance
simpler stronger authentication

Bank Verification Number

Changes in user engagement and business model

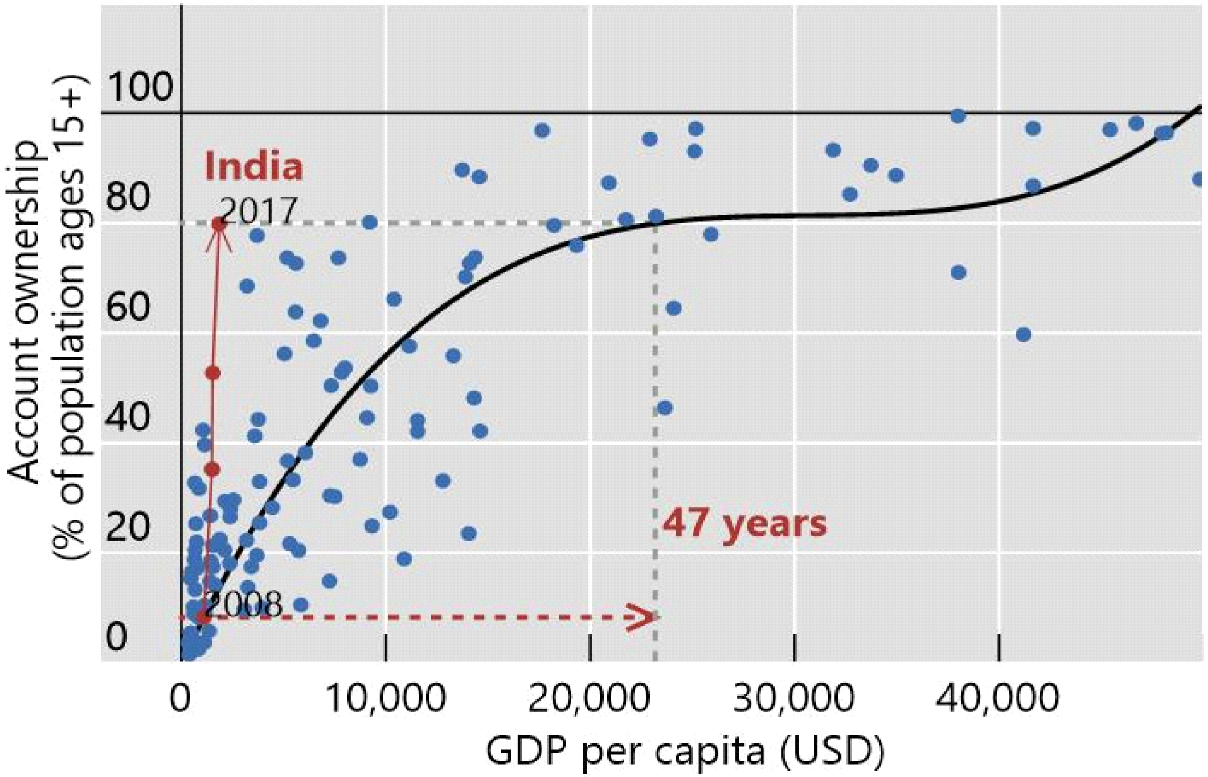
Integration with day to day interactions

Invisible payments

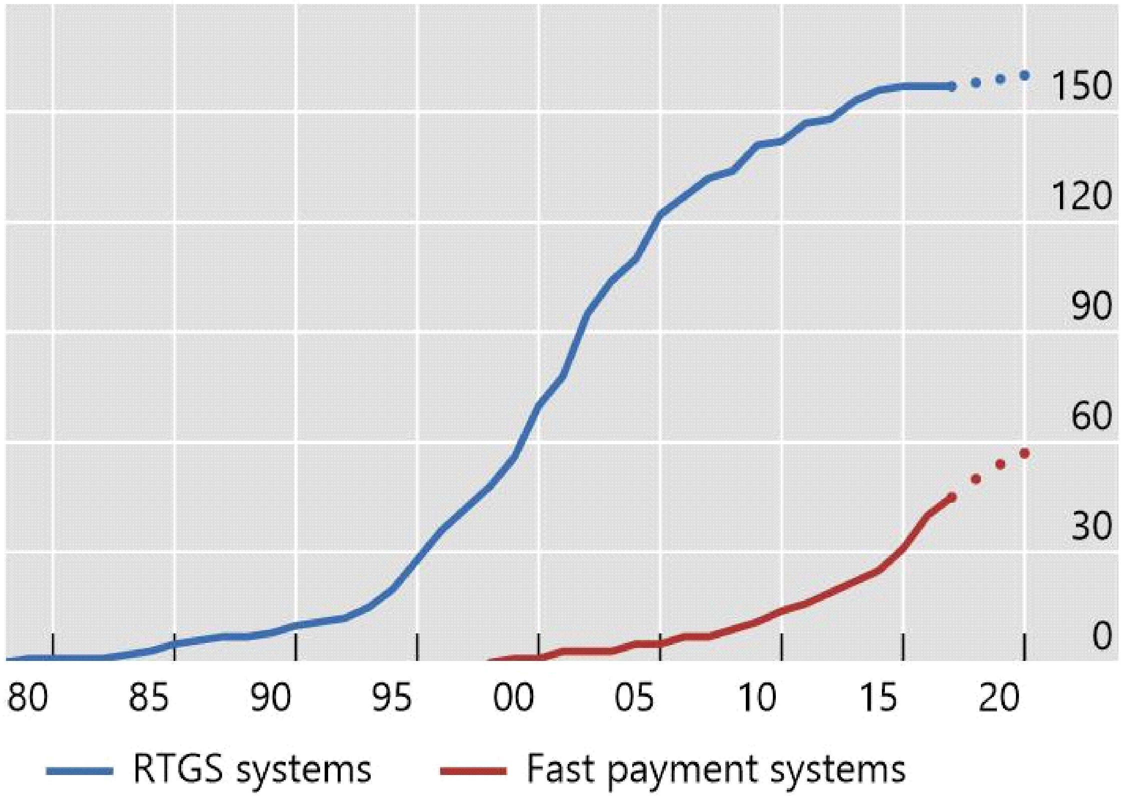
Big Data and Analytics

Other Trends powering financial inclusion

Account ownership rises with income, but countries can leapfrog



Diffusion of fast payments[1]



Source: Bech, Shimizu and Wong (2017); FIS (2018); IMF, *World Economic Outlook*, October 2019; World Bank Findex data; Instapay; national data.

[1] The dashed part of the lines corresponds to projected implementation.

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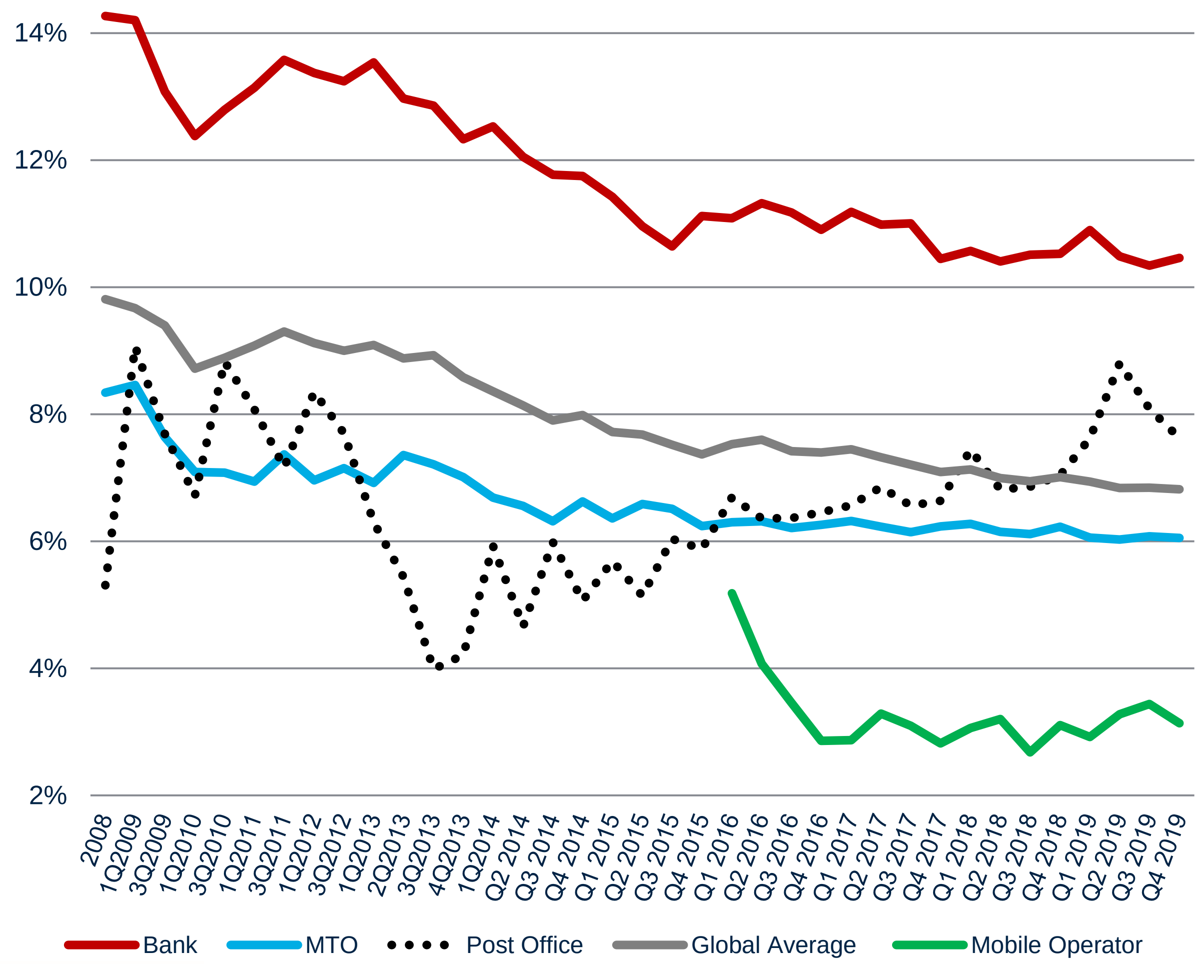
WIDE VARIATION IN PRICE BASED ON PROVIDER TYPE



The cost of sending remittances through **Banks modestly decreased in the last year**; from 10.53% in Q4 2018 to **10.46% in Q4 2019,** and remained the most **expensive RSP type.**

The cost of transferring through **Post Offices increased over the past year**; recorded at 7.04% in Q4 2018 to 7.63% in Q4 2019

In the same period, the cost of sending through **MTOs remained stable;** 6.06% in Q4 2018 compared to 6.05% in Q4 2019.

The cheapest of RSP type in Q4 2019 were Mobile Operators (3.14%) but these still account for a very small share of the sample size.

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IN CONCLUSION

- CBDCs should be seen in the context of ongoing innovations
- CBDCs per se will not address financial inclusion
- Further research on CBDCs is essential
- Cross-border payments needs particular attention
- Need to step-up international collaboration


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