

13TH IMF STATISTICAL FORUM



MEASURING
CROSS-BORDER ECONOMIC
and **FINANCIAL LINKAGES**
in a Dynamic World

#StatsForum



Digital Finance in an Interconnected World: Measurement and Data Challenges

NOVEMBER 20, 2025

Bidisha Das, Paweł Pisany
IMF

All authors are from the IMF's Statistics Department. The views expressed are those of the authors and do not represent the views of the IMF, its Executive Board, or IMF management.

Concepts Meet Compilation: Our Two “D” Framework

- Digital innovations: CBDCs, e-money, stablecoins, tokenized deposits, other crypto assets.
- Transcends borders—global, no longer domestic phenomena.
- All loosely called "Digital Money".
- Statistical guidance still evolving—limited literature on measurement frameworks.



Definition: Rethinking Money and Liquidity

- Applies principles of international statistical standards to assess which digital innovations qualify as 'money' from macroeconomic perspective and statistical compilation.
- Proposes expanded liquidity aggregates capturing instruments along the moneyness-liquidity spectrum.






Data: Building Measurement Architecture


- Identifies data dimensions needed to comprehensively measure money/liquidity in today's interconnected digital landscape.
- Proposes a collection and sharing framework commensurate with these data needs.

Where We Start: Money under Current MFS Guidance


Definition of “Broad Money”

	FINANCIAL INSTRUMENTS	Must exhibit "moneyness"—either widely used media of exchange or liquidity (easy conversion to cash), and stable store of value . Currency, transferable and other deposits, money market fund shares, and certain short-term debt securities like certificate of deposits
	ISSUER	Typically, central banks and depository corporations (deposit-taking institutions and money-market funds) which are collectively termed "depository corporations".
	HOLDER	Institutional sectors: households, non-financial corporations, other financial corporations, state and local governments that use the financial instruments for domestic transactions, consumption, investment, or savings.

Data Sources

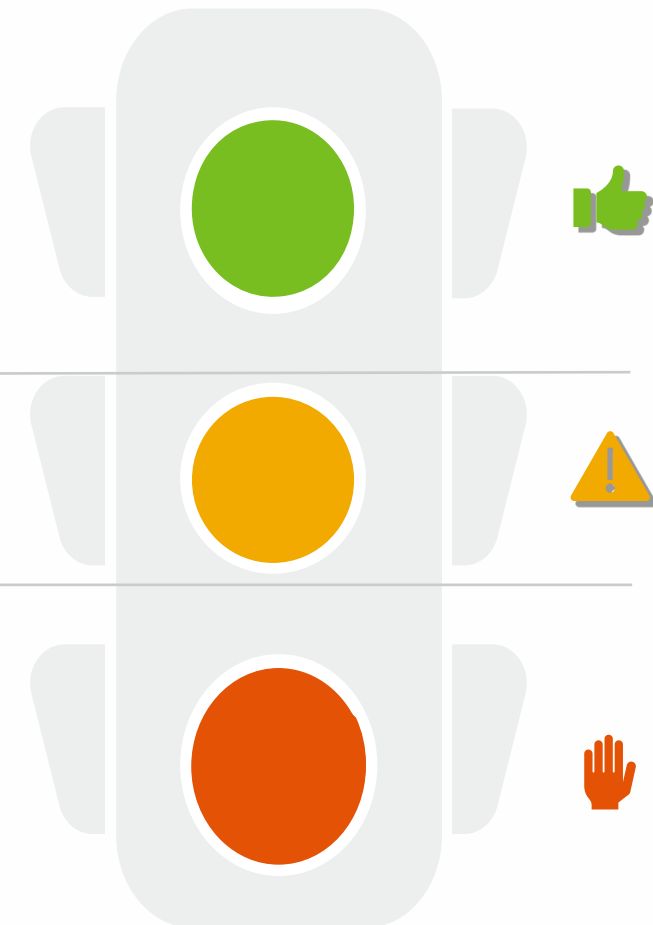


Liabilities side of issuers' balance sheet or financial statements



Potential Classification and Moneyness of Digital Innovations

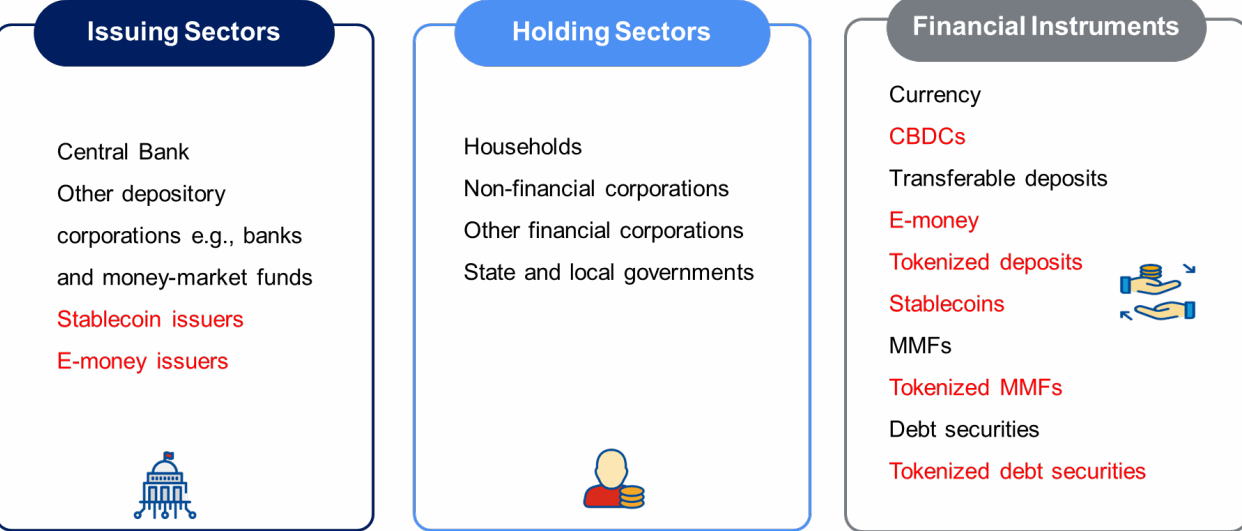
Select Innovations	Statistical Classification	General medium of exchange	Liquidity	Stable store of value
CBDCs*	Currency and deposits	✓ Yes	✓ Yes	✓ Yes
Electronic money*	Currency and deposits	✓ Yes	✓ Yes	✓ Yes
Tokenized deposits and deposit tokens	Deposits or debt securities or even currency	✓ Highly likely	✓ Yes	✓ Yes
Tokenized money market funds	Money market fund shares	x No	✓ Yes	✓ Yes
Tokenized debt securities and debt security tokens*	Debt securities	x No	– Depends	– Depends
Stablecoins*	Currency and deposits	– Intended but not yet seen	– Depends	– Depends
Tokenized equity and equity tokens	Equity securities or debt securities	x No	– Depends	x No
Crypto-assets without corresponding liability (Bitcoin/Ether)*	Non-financial assets	– Intended but not yet seen	✓ Yes	x No



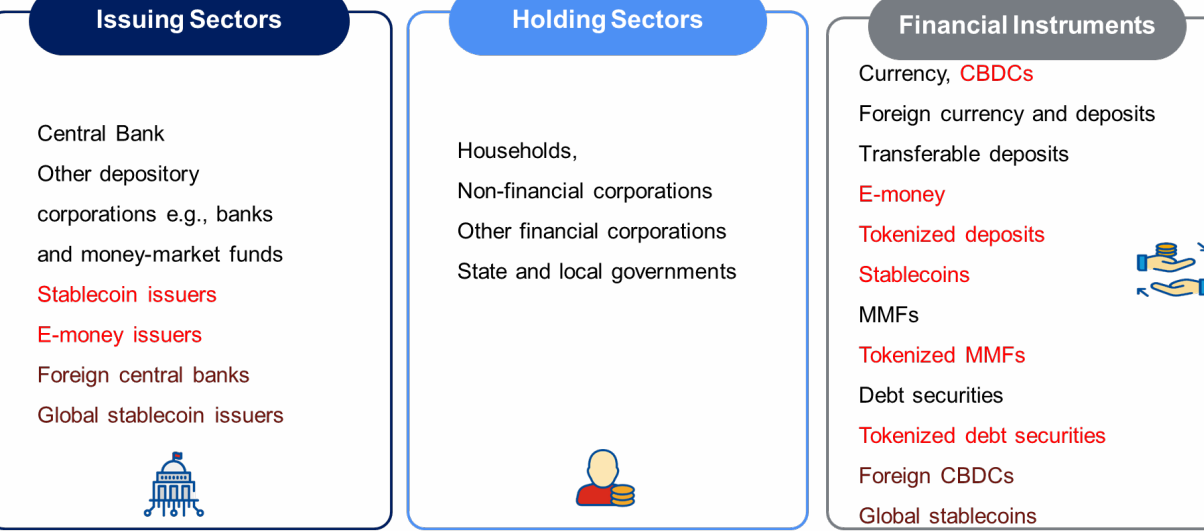
*Classification already discussed in 2025SNA/BPM7

Compiling Tomorrow's Money: A Simulation

A digital environment where the new instruments being used domestically are issued primarily by resident institutions



A digital as well as cross-border usage environment, where the new instruments being used domestically are issued by nonresidents

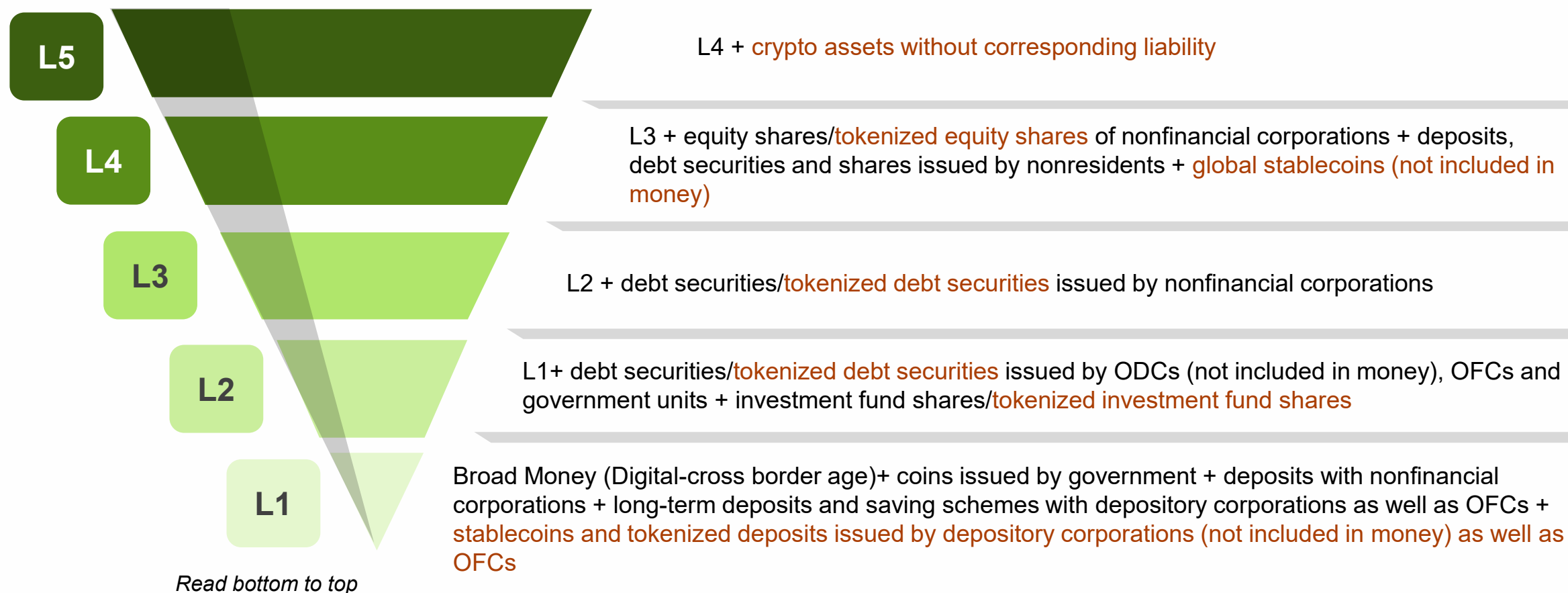


Traditional currency substitution: Foreign currencies and deposits are included in money aggregates when widely used domestically as per the current framework too!

Digital amplification risk: CBDCs and global stablecoins may intensify cross-border currency substitution through enhanced accessibility and transferability.

Beyond Money: Rethinking the Liquidity Spectrum

The paper adapts the MFS liquidity framework—which already covers **certain liquid** instruments and **issuers beyond depository corporations**—for a future digital and cross-border financial landscape.

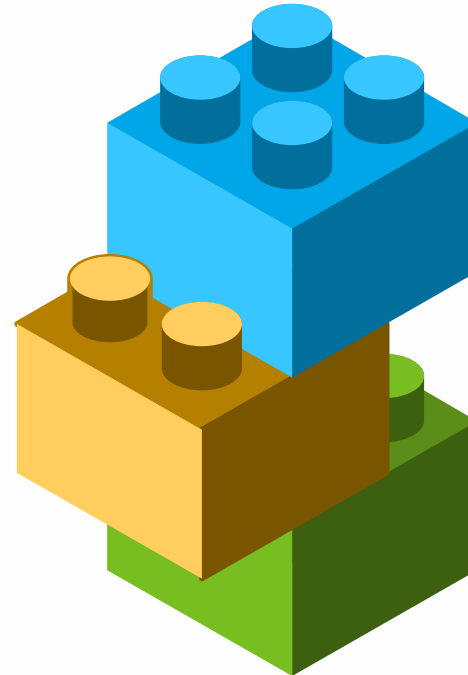


Building Tomorrow's Aggregates: Data Dimensions to Consider

For each potential aggregate, **macroeconomic statisticians and data compilers** possibly need three key data dimensions: the type of instrument, the sector holding it, and the amount with each sector.

Who Holds-Sectoral Breakdown

- Households
- Deposit taking corporations
- Other financial corporations
 - Money market funds
- Non-financial corporations
- State and local governments
- Central government
- Nonresidents



What-Instrument Type

- CBDCs
- Stablecoins
- E-money
- Deposit tokens
- Tokenized bonds
- Other crypto assets

How Much-Stock/Position Data

- Outstanding amounts
 - Flows

Challenge Ahead: Sourcing the Data

A very simplified presentation

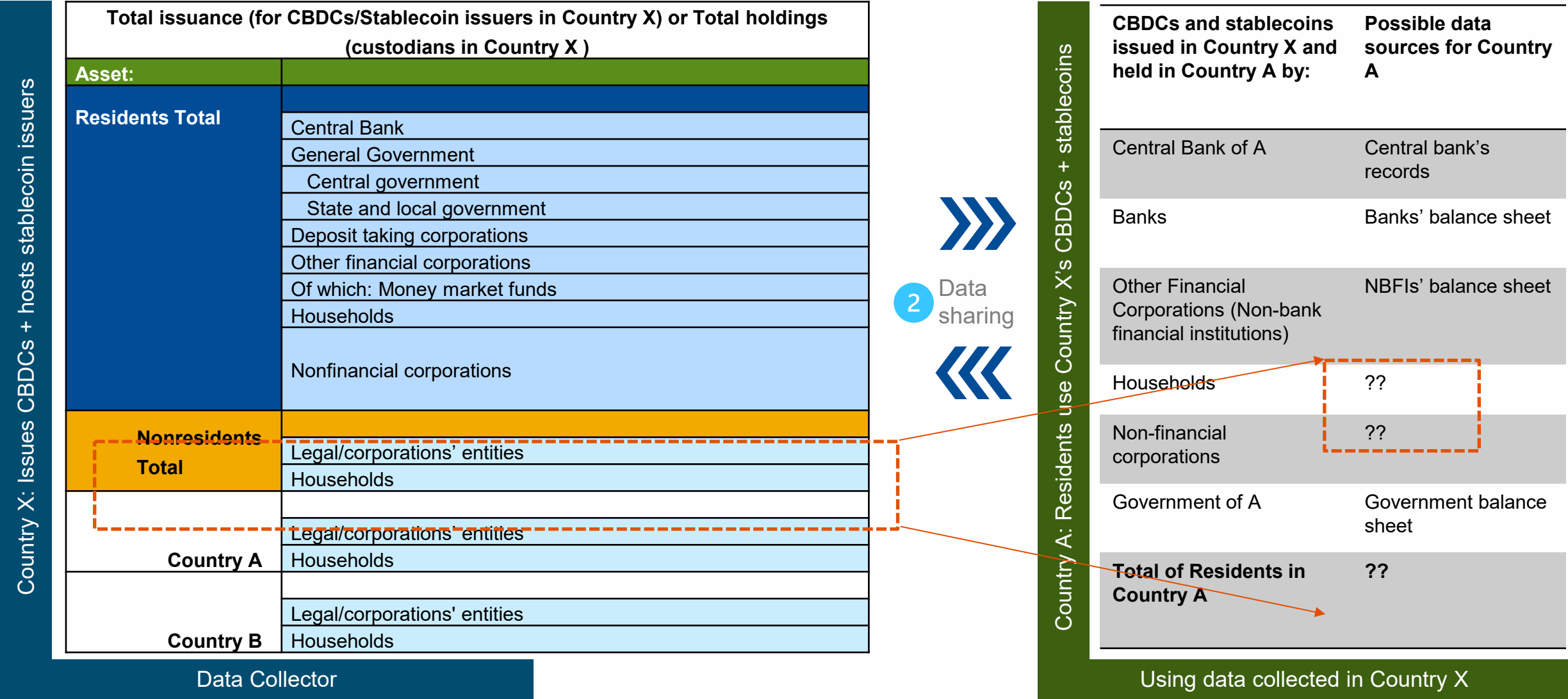
	Primary Sources	Potential Issues
CBDCs	Central bank	Design (anonymity levels), intermediaries involved
Stablecoins issued domestically	Issuer of the stablecoins Custodians	Reporting mandates Custodians' jurisdiction, reporting mandates
Deposit Tokens	Banks	Design (anonymity levels)
Foreign CBDCs	Foreign central banks Custodians	Design, cross-border collaboration Custodians' jurisdiction, reporting mandates, cross-border collaboration
Global Stablecoins	Custodians, Issuers	Same as above
Unbacked Crypto Assets	Custodians	Same as above



Holdings in unhosted wallets and cold storage of stablecoins and unbacked crypto assets limit data availability even with the CASPs.

Way Forward: Enhanced Data Collection and Data Sharing

- 1
- As regulations advance, enhance data collection to identify where (country) and who (sector) holds assets from resident issuers and custodians abroad (or of the nonresidents)



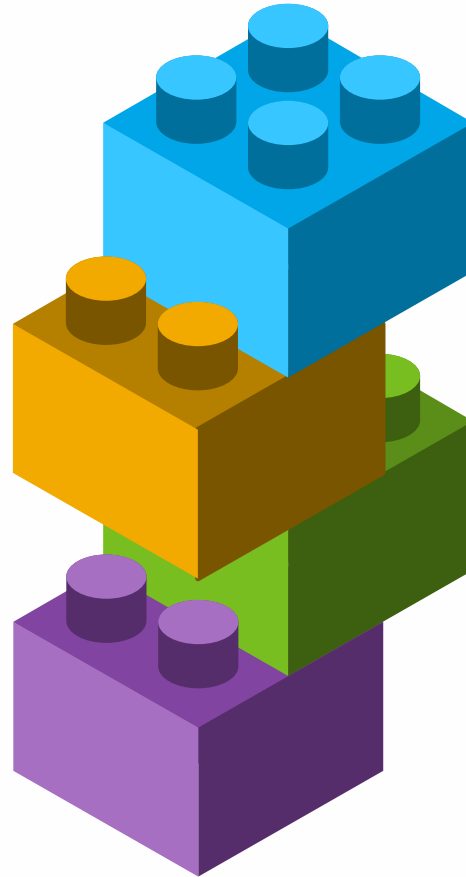
A Holistic Data Collection Framework: The Complete Story!

Who Holds What, How Much and Where!

How Much-Stock / Position Data

- Outstanding amounts
- Flows

Where- County and Sector Breakdown of Nonresidents



What-Instrument Type

- CBDCs
- Stablecoins
- E-money
- Deposit tokens
- Tokenized bonds
- Other crypto assets

Who Holds-Sectoral Breakdown

- Households
- Deposit taking corporations
- Other financial corporations
 - Money market funds
- Non-financial corporations
- State and local governments
- Central government
- Nonresidents

G20 DGI: A Next-Generation Data Collection and Sharing Framework

Recommendation 11 on Digital Money

01 – Framing the Questions

- Collaboratively discussed data dimensions needed for policy making including macroeconomic statistics
- As regulations develop, these data dimensions become key references for discussions

02 – Testing Data Collection

- Developed [standardized templates](#) to test data collection with the Who Holds-What and Where principle!
- Continuous refinement as pilot progresses

03 – Combining Sources

- Combines alternative data sources (on-chain analytics) with traditional regulatory and survey data
- Pragmatic approach: leveraging existing data even if not originally designed for macroeconomic statistics

04 – Sharing Knowledge and Data

- Facilitates international peer learning on data compilation methods
- Builds infrastructure for cross-border data sharing

