

11th IMF Statistical Forum
**MEASURING MONEY IN THE
DIGITAL AGE**

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#StatsForum



STATISTICS

Compilation Guidance on the Recording of Crypto Assets

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Outline

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- Compilation Guidance: Outline
- Initial Content
- Proposed Timeline
- Questions and Comments

Compilation Guidance: Motivation



Given the complex nature of crypto assets, the development of methodological guidance will continue to require extensive consultations with relevant stakeholders

Two guidance notes developed in the context of the update of *System of National Accounts (2008 SNA)* and *Balance of Payments Manual (BPM6)*—covering fungible and nonfungible crypto assets



Data compilers have requested for practical guidance on source data, collection tools and methods for measuring stocks and flows

To ensure consistent and comparable estimates across countries aligned with the international statistical standards



Compilation guidance should be seen as an evolving document requiring ongoing updates

Responding to changes in the crypto asset ecosystem and regulatory/accounting/legal frameworks

Compilation Guidance: Outline

- I. Overview of Crypto Assets Ecosystem
- II. Methodological Framework for the Recording of Crypto Assets
- III. Data Sources and Compilation Methods
- IV. Use Cases, Country Experiences, and Reporting Tools

Annexes

- A1. Data Reporting Templates and Survey Instructions
- A2. The Concept of Money and Liquidity in MFS



Initial Content

Chapter 1. The Ecosystem



The crypto assets market is characterized by a very significant role of intermediaries that largely mirror traditional finance business models



Chapter 1. The Ecosystem



1

Flows between centralized exchanges, including flows between customers of different CEXes (**recorded on-chain**)

2

Flows between customers of the same CEX (**recorded off-chain**, on the centralized ledger managed by the CEX as intermediary)

However, it is difficult to measure the transactions comprehensively at this stage
Ackerer & Ackerer (2023) argue that vast majority of crypto transactions occur **off-chain** (i.e., are recorded on the centralized ledger managed by one exchange, usually CEX)

Chapter 2. Methodological Framework

DGI-3 Rec11

Fungible
Crypto Assets

Designed to act as a general
medium of exchange

Designed to act as a medium
of exchange within a platform

Security crypto assets

With a
corresponding
liability

Crypto assets
without
corresponding
liability
Ex: Bitcoin

Payment
Tokens with a
corresponding
liability

Payment Tokens
without a
corresponding
liability
Ex: GameCredits

Debt security
crypto assets
Ex: Bond-i of
the World Bank

Equity crypto
assets

Derivative
crypto
assets

Issued by
monetary
authority
Ex: CBDCs

Issued by other
entities
Ex: Stablecoins



Nonfungible Tokens (NFTs)

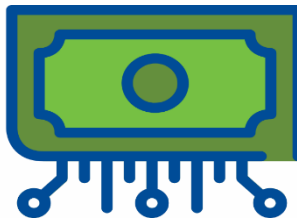
Chapter 3. Data Sources and Compilation Methods: Measuring the Who, to whom, what and where

Who?



Institutional sector of holder

What?



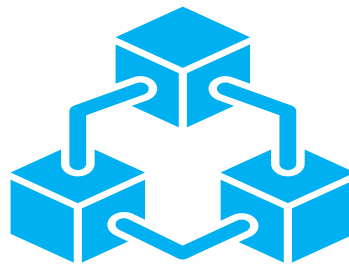
Type of crypto asset

Where?



Residence of the holder

Who issues/mines,
what, where?



Stablecoin issuers, central banks,
and mining companies

3. Data Sources and Compilation Methods: Measuring the Who, to whom, what and where

Administrative data sources

For example:

Who/what/where

- Financial statements
- Tax records
- Records of regulators, etc.
- Standardized Reporting Forms (SRFs)

Flows from whom to whom/what

- International transactions reporting system (ITRS)

Who issues/what and where

- Financial statements of stablecoin issuers

Existing surveys and possible new surveys

Who/what/where and flows from whom to whom/what

- Existing economic and households' surveys including the surveys established for regulatory purposes

New surveys and/or expanding the existing

- Crypto exchanges/custodians
- Collaboration with large players

Centralized (e.g., Binance, Coinbase) and decentralized exchanges (e.g., Uniswap, Curve)

Who mines/what and where

- Mining companies

Templates and instructions for data collection

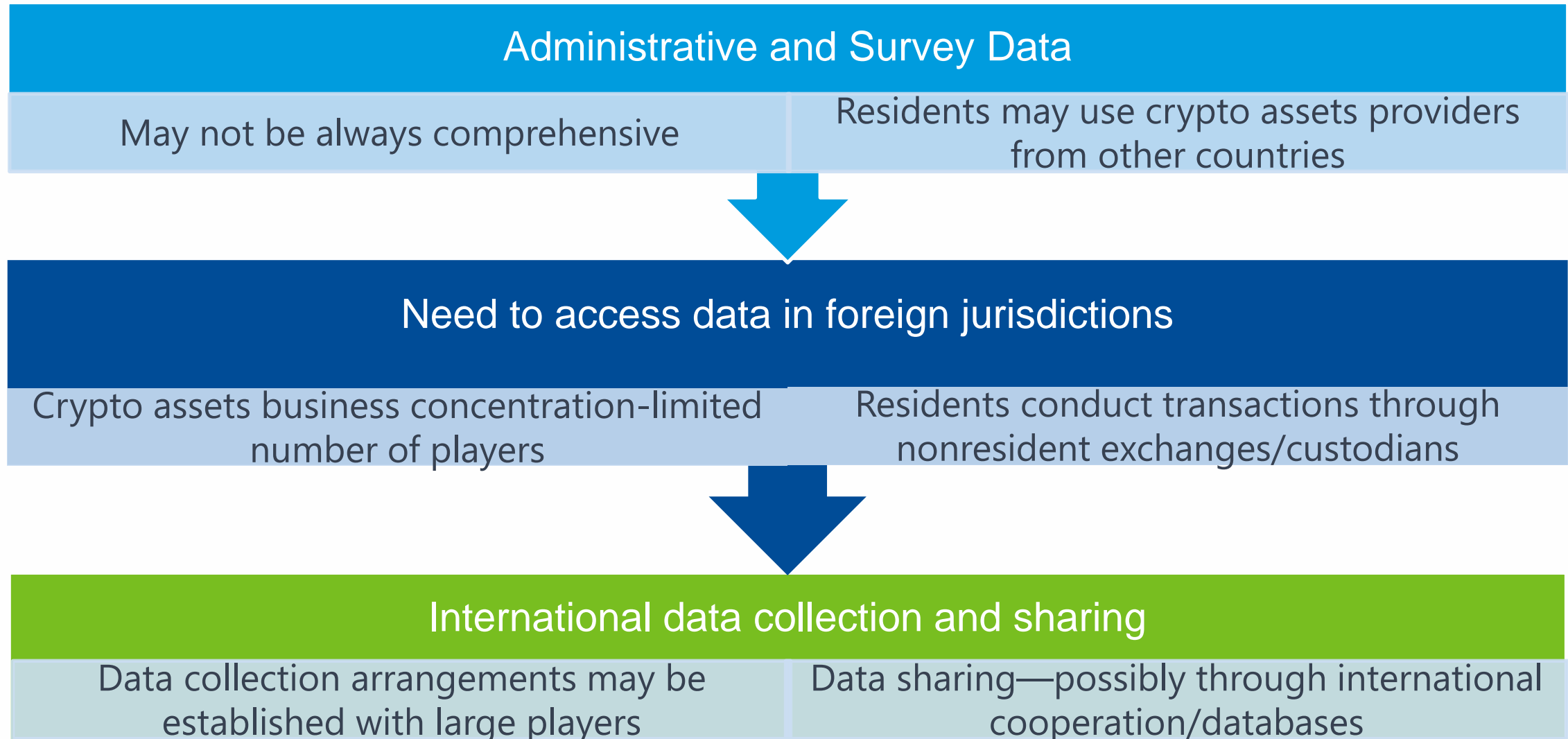
Alternative data sources

For example:

Mainly, flows from whom to whom/what

- Private data sources (e.g., [Chainalysis Market Intel](#), [Coinmetrics](#))
- Existing crypto assets data related projects of international organizations (e.g., [Project Atlas](#) and [Pyxtrial](#) of BIS)

Chapter 3. Data Sources: Need for Data Sharing Across Jurisdictions



Chapter 4. Use Cases and Country Experiences

Crypto Assets Data Platforms of BIS

Project Atlas: Cross-border flows between exchanges—combines on- and off-chain information

Project Pyxtrial: Focuses on assets and liabilities of stablecoin issuers



Country Experiences

- Highlighting the sources of data, estimates published, and areas requiring improvements
- Brazil, Canada, India, Italy, Japan, Switzerland, the USA, etc.
 - Experiences mainly involve data collection through surveys, tax records, ITRS, etc.
- The list of countries is tentative—some more countries may volunteer to share their experiences during the proposed workshop

Compilation Guidance: Proposed Timeline



Short-term deliverables

October - November 2023

- ▶ Presentations:
 - ◆ Advisory Expert Group (AEG) on National Accounts meeting: October 16-18, 2023 [completed]
 - ◆ IMF Committee on Balance of Payments Statistics (BOPCOM) meeting: October 24-26, 2023 [completed]
 - ◆ Presentation to the 11th IMF Statistical Forum: November 15-16, 2023

Collaboration and Research

November 2023 – October 2024

- ▶ Research and drafting phase
- ▶ Collaboration with DGI-3 Rec 11 TT
- ▶ Practical workshop: January/February 2024
- ▶ Interim updates to AEG/BOPCOM

Long-term deliverables

November- December 2024

- ▶ Draft document on data sources and compilation methods, and use cases/experiences
- ▶ Draft document on other sections
- ▶ Presentation of the draft document to the AEG/BOPCOM



Questions

Comments

Sources / Literature

- Graf von Luckner, C, C Reinhart and K Rogoff (2021). "Decrypting new age international capital flows, *NBER Working Paper*, no 29337.
- Bitfury Crystal (2019). Report on International Bitcoin Flows 2013 – 2019
- Alevtina Dubovitskaya Ackerer and Damien Ackerer (2023). The Underlying Technology for Crypto assets. In: *The Emerald Handbook on Crypto assets: Investment Opportunities and Challenges*, 265–282 Emerald Publishing Limited
- BIS Innovation Hub (2023). Project Atlas: mapping the world of decentralized finance. [Project Atlas: mapping the world of decentralised finance \(bis.org\)](https://www.bis.org/project-atlas)
- Chainalysis (2023). The 2023 Geography of Cryptocurrency Report. [The Chainalysis 2023 Geography of Cryptocurrency Report](https://www.chainalysis.com/2023-geography-of-cryptocurrency-report/)
- Statista.com
- Several websites on crypto assets related data and other details (e.g., coinbase.com)
- Moreover, authors of this presentation acknowledge great insights from the presentations and discussions during the 1st thematic workshop on DGI-3 Recommendation 11