Compilation Guidance on the Recording of Crypto Assets

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Outline

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

Centralized crypto exchanges/trading platforms that act as custodians and intermediaries; crypto transactions are not necessarily recorded on the blockchain (so called off-chain transactions); currently the most important intermediary type in the crypto ecosystem.

Decentralized crypto exchanges - connect crypto buyers and sellers employing smart contracts for trade execution; transactions are recorded on the blockchain (on-chain).

Crypto digital wallets facilitate the storing of crypto assets’ public and private keys and enable customers to send, receive, and spend crypto assets safely with very low fees.

Crypto custodians provide services for storing private keys - protecting crypto assets and potentially offering other services including sending, receiving, and spending crypto assets; custodian services may be provisioned by different entities, among other banks, in particular CEXs are custodians and intermediaries in the crypto ecosystem.
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
  - With a corresponding liability
    - Issued by monetary authority
      - Ex: CBDCs
    - Issued by other entities
      - Ex: Stablecoins
  - Crypto assets without corresponding liability
    - Ex: Bitcoin

- Designed to act as a medium of exchange within a platform
  - Payment Tokens with a corresponding liability
    - Ex: GameCredits
  - Payment Tokens without a corresponding liability
    - Ex: Bond-i of the World Bank

Security crypto assets
- Debt security crypto assets
- Equity crypto assets
- Derivative crypto assets

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

<table>
<thead>
<tr>
<th>Administrative data sources</th>
<th>Existing surveys and possible new surveys</th>
<th>Alternative data sources</th>
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</thead>
</table>
| **For example:** **Who/what/where**  
  - Financial statements  
  - Tax records  
  - Records of regulators, etc.  
  - Standardized Reporting Forms (SRFs)  | **Who/what/where and flows from whom to whom/what**  
  - Existing economic and households' surveys including the surveys established for regulatory purposes  | **For example:**  
  Mainly, **flows from whom to whom/what**  
  - Private data sources (e.g., Chainalysis Market Intel, Coinmetrics)  |
|  | **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)  |  
  - Existing crypto assets data related projects of international organizations (e.g., Project Atlas and Pyxtrial of BIS)  |
| **Flows from whom to whom/what**  
  - International transactions reporting system (ITRS)  | **Who issues/what and where**  
  - Financial statements of stablecoin issuers  |  |
| **Who issues/what and where**  
  - Financial statements of stablecoin issuers  | **Who mines/what and where**  
  - Mining companies  |  |

| Templates and instructions for data collection  |  |  |
Chapter 3. Data Sources: Need for Data Sharing Across Jurisdictions

Administrative and Survey Data

May not be always comprehensive
Residents may use crypto assets providers from other countries

Need to access data in foreign jurisdictions

Crypto assets business concentration—limited number of players
Residents conduct transactions through nonresident exchanges/custodians

International data collection and sharing

Data collection arrangements may be established with large players
Data sharing—possibly through international cooperation/databases
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


- 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