



# THE RECORDING OF CRYPTO ASSETS IN MACROECONOMIC STATISTICS

INTERNATIONAL WORKSHOP ON THE  
UPDATE OF NATIONAL ACCOUNTS, 2008  
SEPTEMBER 6-8 2022

*SESSION 10: THEMATIC TOPICS - DEVELOPMENTS IN  
FINANCIAL AND PAYMENT SYSTEMS*

Presented by Jorrit Zwijnenburg



# Contents

---

- Background
- **Crypto asset categorisation**
- **Proposal** for their recording in SNA
- **Pending issue:** Recording of crypto assets without corresponding liability



---

# Background



# Background

---

- Emergence of **crypto assets** led to increasing requests for advice on their recording, particularly as they are not referred to in current statistical manuals
- Main **characteristics**:
  - Digital representations of value
  - Exchanged via **peer-to-peer** architecture (i.e. negotiable instruments)
  - Based on **cryptography** (avoiding double spending problem, e.g. Blockchain)
- Main motivation:
  - Transact without the **intervention** of a **third party**
  - Creation of **alternatives to traditional** financial **instruments**



---

# Crypto asset classification



# Types of crypto assets

---

- **Cryptocurrencies** (designed to act as general medium of exchange)
  - Traditional cryptocurrencies (not backed by an asset)
  - **Stablecoins** (backed by asset or seignorage-based)
    - Issued by a monetary authority
    - Not issued by a monetary authority
- **Payment tokens** (designed to act as medium of exchange within a platform)
  - With a corresponding liability
  - Without a corresponding liability
- **Security tokens**
  - **Debt security** tokens
  - **Equity** tokens
  - **Derivative** tokens



# Classification of crypto assets

---

Crypto assets meet the SNA **asset boundary**:

- **Ownership** well defined:
  - Holder of **private keys** associated to an account can spend them at their discretion as they would with cash
  - Transactions between entities are recorded in the blockchain which allows for an identification of ownership
- **Economic benefits** provided to holder:
  - They allow for carrying forward value between accounting periods
  - Buying a unit of a digital coin conveys the expectation that its value will at least remain the same over the period for which it is to be held



# Recording of crypto assets

## **Cryptocurrencies**

---

- With a **corresponding liability**
  - **Issued by monetary authority**
    - Financial asset as there is a corresponding liability
    - Similar to traditional fiat currency
    - Proposal: Record as **'currency' (AF.21)**
  - **Not issued by monetary authority**
    - Financial asset as there is a corresponding liability
    - Different from traditional fiat currency
    - Proposal: Record as separate category
- ***Without a corresponding liability***
  - *Still under discussion*





# Recording of crypto assets

## Payment tokens

---

- With a **corresponding liability**
  - Redeemable with the issuer (i.e. convertible into cash or other asset)
  - Financial asset as there is a corresponding liability
  - Negotiable (although limited to platform or network) debt instrument
  - Proposal: Record as separate category under '**debt securities**' (AF.3)
  
- ***Without a corresponding liability***
  - *Still under discussion*



# Recording of crypto assets

## Security tokens

---

- **Debt security tokens**

- Negotiable instruments serving as evidence of debt
- Also includes utility tokens (as they represent a claim on the issuer and can be exchanged peer-to-peer)
- Financial assets as there is a corresponding liability
- Proposal: Record as **‘debt securities’ (AF.3)** with separate category for utility tokens

- **Equity tokens**

- Provide holder with residual claim on the assets of issuer
- Proposal: Record as **‘equity’ (AF.51)**

- **Derivative tokens**

- Provide right to buy (or sell) a particular instrument or commodity
- Proposal: Record as **‘financial derivatives’ (AF.7)**



---

# Pending issue



# Crypto asset classification

## Pending issue

---

- Still discussion on **crypto assets without a corresponding liability**
  - Designed to act as general medium of exchange
  - Designed to act as medium of exchange within a platform or network
- Main questions:
  - Are they **financial** or **nonfinancial** assets?
  - How to account for their **creation**?



# Financial or non-financial?

---

## **Non-financial**, because ...

- They do not represent a claim (do not have a **counterpart liability**).
- They mainly act as **store of value** similar to valuables.
- Treating them as financial may open door for other commodities.
- Demand for CAWLM as **investment asset** is high compared to their use as medium of exchange.

## **Financial**, because ...

- Not all financial assets represent a claim: monetary gold.
- They are **not used in production**, nor derive their value from artistic and/or sentimental factors.
- Instead, CAWLM derive their value from **trust** that they will start acting as general medium of exchange.
- Not treating CAWLM as financial assets may lead to **barter trade**.



# Produced or non-produced?

---

## **Produced**, because ...

- **Mineable** coins come into existence as result of the **work of miners**.
- Who first solves the cryptographic puzzle receives a coin.
- Miners can increase share of CAWLM by improving their mining capabilities.
- Miners receive an explicit validation fee and newly mined CAWLM.
- **Non-mineable** coins can be regarded as being created and brought into circulation by their **designer**.
- This approach would be rather straightforward, whereas the alternative may require various assumptions.

## **Non-produced**, because ...

- Miners are involved in **validation services**.
  - New coins can be brought into circulation via other ways than mining.
  - Designer determines way and pace for releasing new coins.
  - Remuneration via coin is way to keep explicit fees low and to bring new coins into circulation.
  - Miners receive an explicit and an implicit fee.
- **Designer** as initial owner in case of explicit sale of a new coin.
- **Owners of existing CAWLM** as initial owner in case of release in exchange for validation (benefiting from mining).
- This may require assumptions to derive the exact owners of existing coins.



# Recording options

---

- Option I: Produced nonfinancial Asset
- Option II: Nonproduced nonfinancial asset
- Option III: Financial asset
  
- Discussion at upcoming joint meeting of **BOPCOM** and **AEG** in October to reach a final decision



---

# Thank you for your attention

For more information please contact:  
[Jorrit.Zwijnenburg@oecd.org](mailto:Jorrit.Zwijnenburg@oecd.org)