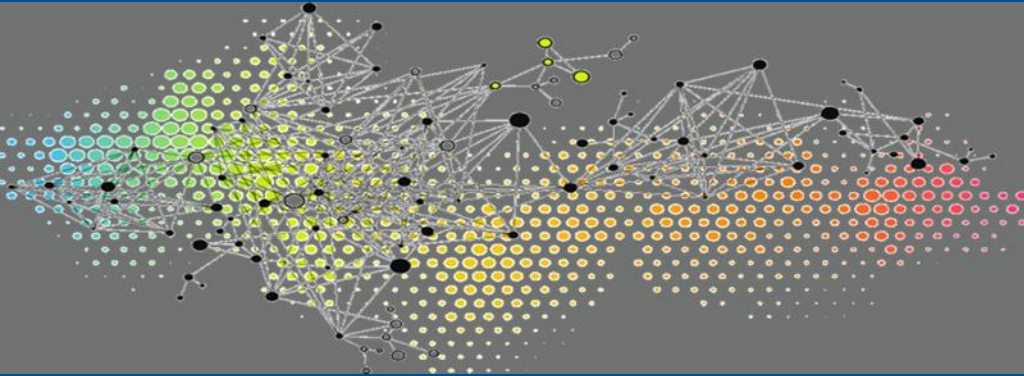




Recording of Crypto Lending/Borrowing in Macroeconomic Statistics



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Outline

Crypto assets lending/borrowing

Crypto assets lending/borrowing: Proposed Options

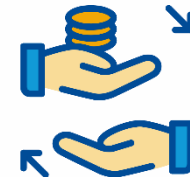
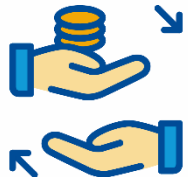
Crypto lending platforms—Sectorization and output

Concluding remarks and recommendations

Questions for AEG

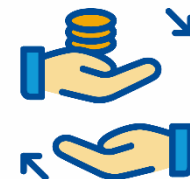
Crypto Assets Lending/Borrowing

- **Institutional units lend their crypto assets to other institutional units for a specified period in exchange for an agreed payment/revenue in crypto assets or in fiat currencies**
 - Applicable to both crypto assets with/without a corresponding liability
 - May be seen to operate like traditional lending in cash or like securities lending
 - Borrower can use the borrowed assets for various purposes (e.g., lending, staking, trading, investing)
- **The primary focus of this presentation is on crypto assets without a corresponding liability (CAWLM)**
- **Mostly channeled through crypto exchanges/platforms—Centralized (CEX) and Decentralized (DEX) platforms**
 - CEX offer fixed and flexible accounts to earn revenue on the crypto assets deposited with them. These off-chain lending/borrowing transactions may transfer ownership of the crypto assets among the parties involved.
 - DEX provide flexible borrowing and lending options, but do not typically offer fixed-term accounts like CEX. These on-chain transactions may not transfer ownership of the crypto assets among the parties involved.



Crypto Assets Lending/Borrowing

- CAWLM are placed with the wallet of the borrowing unit and that unit has full control over those assets for the duration of the arrangement and can use them freely
- **Two perspectives are envisaged**
 - Lending cryptos may be considered as similar to lending in cash— in the case of cash loans, the lender is still subject to price fluctuations like exchange rate changes and creates a borrower-lender relationship implying a new financial instrument.
 - Crypto lending may be considered in a similar way as securities lending, gold loans, etc.
- In both cases, lenders earn revenue/interest by providing liquidity, while borrowers can for instance access liquidity without selling their crypto holdings for various purposes – staking, short selling etc., provided they deposit sufficient collateral.



Crypto Assets Lending/Borrowing: Proposed Options

Proposed options for recording the stocks/flows and revenue associated with lending/borrowing of crypto assets without a corresponding liability (CAWLM):

- **Option 1A.** Lending of CAWLM to another institutional unit is treated as lending in cash and related revenue is treated as interest.
- **Option 1B.** Lending of CAWLM to another institutional unit is treated similar to lending of securities or other nonfinancial assets such as gold (i.e. no transaction/position is recorded in CAWLM) and related revenue is treated as interest.
- **Option 2.** Lending is regarded as putting CAWLM at the disposal of another institutional unit under a resource lease and related revenue is treated as rent.
- **Option 3.** Lending of CAWLM to another institutional unit is treated as provision of services, and related revenue is treated as a payment for those services.



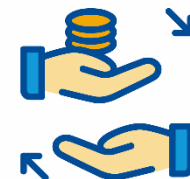
Crypto Assets Lending/Borrowing: Option 1A

Option 1A. Lending in CAWLM treated as lending in cash and related revenue as interest

- Role of CAWLM in the financial system—largely influenced by the characteristics of CAWLM lending (mainly through platforms)
- **“Funds”** in the definition of loans in macroeconomic statistics—traditionally refers to the transfer of money, typically in the form of cash or deposits
 - Interpretation of "funds" may evolve to include fungible assets
- Lending in CAWLM treated as lending in cash—practical solution considering the real-world use of CAWLM in lending
 - CAWLM lending is still a **debt obligation** regardless of their classification
 - Focus shifts to how loans function economically, rather than how the underlying asset is classified
 - Borrowing units can on-lend as they are the owners of those asset
- CAWLM (like fiat currency) is a bearer asset—institutional unit which holds the private keys of the wallet has full control and ownership over it
- **This treatment could be extended to securities lending and gold loans in the future**

Crypto Assets Lending/Borrowing: Option 1A

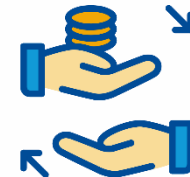
- Lending in CAWLM treated as lending in cash may not be appropriate
 - CAWLM are treated as nonfinancial assets
 - Limited use as a medium of exchange—CAWLM cannot be universally accepted like cash
- Adopting this treatment for crypto lending will introduce inconsistency with the current treatment of securities lending, repurchase agreements and other types of non-financial asset loans



Crypto Assets Lending/Borrowing: Option 1B

Option 1B. Lending of CAWLM is treated similar to lending of securities/other nonfinancial assets and related revenue as interest

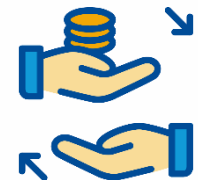
- Process of lending/borrowing resembles securities lending and related revenue as interest income
 - No transaction in CAWLM recorded and no changes made to the balance sheets of parties involved
 - Legal ownership of the assets transferred to the borrower, but the economic ownership remains with the original owner, as they are exposed to the CAWLM price changes (risk/reward of ownership).
 - Revenue from crypto lending could be recorded as interest—along the lines of fees for securities lending, monetary/nonmonetary gold loans and other commodities, which are all recorded as interest by convention
 - Borrowing units can on-lend as they are the legal owners of the borrowed asset
- May not be appropriate
 - Contradicts the definition of interest (but there is an exception already)
 - Link between income and related stocks may not be maintained—the borrower records investment income debit/expenditure but no financial position



Crypto Assets Lending/Borrowing: Option 2

Option 2. Lending is regarded as putting CAWLM at the disposal of another institutional unit under a resource lease and related revenue as rent

- CAWLM are non-produced nonfinancial assets—revenue receivable from lending may be recorded as rent
 - Scope of non-produced nonfinancial assets already expanded, but not the related income components
 - Requires modification to the current definition of rent—remove from the definition “for the use in production”
 - On-lent of borrowed CAWLM(i.e., sub-leasing)—revenue receivable could be recorded as rent
- May not be conceptually sound
 - CAWLM are fungible assets unlike other assets under resource lease (same assets need to be returned after the lease)
 - Current definition requires the assets to be used in production, which is not the case with CAWLM
 - The concept of rent may be considered narrow in the context of crypto lending—as one of the key functions of the platform (e.g., liquidity management) is not captured.



Crypto Assets Lending/Borrowing: Option 3

Option 3. Lending of CAWLM is treated as provision of services and related revenue as payment for those services

- Lending of CAWLM is considered as provision of services and related revenue as payment for services
 - Consider them as providing support to validation services and/or other services to support the functioning of platform
 - Uniform recording of all types of revenue associated with similar transactions (e.g., crypto staking, cloud and pooled mining)
- May not be appropriate
 - These arrangements may not hold true when the assets are on-lent which is the practice with crypto lending
 - Services could only be provided in relation to produced assets
 - If households are lending—they are considered service providers, which is unwarranted



Crypto Lending Platforms—Sectorization and Output

- Intermediate between lenders and borrowers of crypto assets—modalities of operation differ between CEX and DEX
- **Centralized platforms**
 - Take custody and/or ownership of deposited assets (i.e., crypto assets on-lent are transferred to the wallet of the concerned platform), set payment rates, handle collateral, and manage the lending/borrowing process
 - Lend to borrowers at a higher rate and pay revenue on deposited assets at a lower rate – **like financial intermediation**
 - If the ultimate risk of assets deposited on centralized crypto platforms and lent lies with the platform, such centralized crypto platforms should be considered as financial intermediaries—classified as **other financial intermediaries except insurance corporations and pension funds**
 - **Otherwise, classify them as financial auxiliaries**
 - For the service provided by the centralized platform, lenders and borrowers pay an implicit fee to the platform— which is the main output of these platforms
 - Implicit fee—working in a similar way as “FISIM” in the *2008 SNA/BPM6*, in case such platforms are considered as financial intermediaries

Crypto Lending Platforms—Sectorization and Output

- **Decentralized platforms**
 - Do not take ownership of crypto assets being lent
 - Facilitate lending between lenders and borrowers with the help of smart contracts
 - Lend to borrowers at a higher rate and pay revenue on deposited assets at a lower rate
 - Appear to operate like **investment funds managers** and facilitate transactions and other services by pooling depositors' funds to redistribute them as loans to borrowers without taking on any of the risk—**classified as financial auxiliaries**
 - The spread between interest on loans and deposits could be treated as an explicit fee similar to commissions earned by brokers—which is the main output of these platforms.

Concluding Remarks and Recommendations

- Lending of CAWLM does not properly align conceptually with the current macroeconomic statistics frameworks
- The drafting team acknowledges that the recording of crypto asset lending and borrowing is a very complex issue
- Considering the pros and cons of the four options, **the drafting team considers that option 2 and option 3 may not be appropriate for the reasons provided**
- **Options 1A and 1B have equally supporting and balanced arguments for treating crypto lending/borrowing and recording of interest. Moreover, the recording of interest will equally apply to crypto assets with a corresponding liability.**
- **Include the treatment of CAWLM lending in the research agenda, irrespective of the recommendation at this stage**
- **In addition, include the treatment of securities lending and gold loans in the research agenda to enable a holistic discussion and treatment**

Questions For AEG

1. *Assuming agreement with the drafting team's recommendation to disregard options 2 and 3, which of the options do you prefer for the recording of CAWLM lending and borrowing?*

Option 1A. Lending of CAWLM to another institutional unit is treated as lending in cash and related revenue is treated as interest.

Option 1B. Lending of CAWLM to another institutional unit is treated similar to lending of securities or lending other nonfinancial assets such as gold (i.e. no transaction/position is recorded in CAWLM) and related revenue is treated as interest.

- 2.1 *Do you agree that the centralized platforms should be classified as other financial intermediaries except insurance and pension funds?*
- 2.2. *Do you agree that the decentralized platforms facilitate lending between borrowers and lenders, in a role similar to investment fund managers and classified as financial auxiliaries?*
3. *Do you agree that the recording of CAWLM lending/borrowing be included in the SNA/BPM Research Agenda irrespective of the recommendation at this stage?*
4. *Do you agree that the recording of securities lending, gold loans and other fungible assets should also be included in the SNA/BPM Research Agenda to enable a holistic discussion on their treatment?*