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# Issue Note: Recording of Crypto Lending/Borrowing in Macroeconomic Statistics

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## **BACKGROUND**

- 1. The Guidance Note (GN) F.18, "The Recording of Crypto Assets in Macroeconomic Statistics," provides recommendations on typology and classification of crypto assets. Crypto assets without a corresponding liability designed to act as a general medium of exchange (CAWLM) are treated as nonproduced nonfinancial assets and reported as a separate category.
- 2. As CAWLM continue to evolve and are becoming more mainstream in the world of finance and business, they are being used to generate additional revenues for their holders through lending and staking, and to support operations for borrowers (e.g., crypto exchanges/digital platforms).
- 3. Lending of crypto assets with a corresponding liability is relatively straightforward to record as they are treated as financial instruments.<sup>3</sup> However, for CAWLM, further elaboration is necessary on the treatment of lending and related revenue.

#### **CRYPTO LENDING/BORROWING**

- 4. Crypto assets lending is a process where 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. It seems to operate like traditional lending in cash, where borrowers will receive assets and agree to repay them with interest over a specified period to the lender. The borrower can use the borrowed assets for various purposes, such as lending, trading, investing, and liquidity management. Crypto lending is applicable to both crypto assets with a corresponding liability (e.g., some stablecoins) and those without a corresponding liability (e.g., Bitcoins, Ether). The discussion in the following paragraphs is intended for CAWLM. For other crypto assets, the treatment as stated in paragraph 3 is clear. For security crypto assets, the treatment for securities lending would apply. For "cash like" such as Central Bank Digital Currency (CBDCs) on the blockchain, cash lending would apply.
- 5. Mostly, crypto lending and borrowing is channeled through crypto exchanges/financial digital platforms both centralized and decentralized, specialized in this business. The lending and borrowing

<sup>&</sup>lt;sup>1</sup> Prepared by Venkat Josyula, Emmanuel Manolikakis, Artak Harutyunyan, Jose Carlos Moreno-Ramirez (all from the Statistics Department, IMF), Celestino Giron (ECB), and Jorrit Zwijnenburg (OECD), in consultation with the SNA/BPM editorial teams.

<sup>&</sup>lt;sup>2</sup> An earlier version of the <u>Issue Note covering crypto lending</u>, <u>staking</u>, <u>cloud</u>, <u>and pooled mining</u> was presented to the July 2024 AEG meeting and circulated via written procedure to BOPCOM. While there was consensus on the proposed treatment of staking, cloud and pooled mining as services, no agreement was reached on the treatment of crypto lending and related revenue.

<sup>&</sup>lt;sup>3</sup> The manuals provide comprehensive recommendations on how to record financial instruments. However, compilers may still face challenges in identifying the transactions, residency, and other data issues with crypto assets.

<sup>&</sup>lt;sup>4</sup> Financial reports of companies and market participants such as crypto exchanges generally refer to these payments/revenue as "interest".

through centralized (e.g., Nexo) and decentralized (e.g., Aave) platforms<sup>5</sup> is also generally known as off-chain and on-chain lending, respectively. In the context of lending through centralized platforms, off-chain refers to the fact that the lending process and transactions are managed off the blockchain by a central entity. In contrast, lending through decentralized platforms is considered on-chain because it leverages smart contracts on a blockchain to facilitate lending and borrowing transactions. More importantly, on-chain transactions are actively facilitated by the platform which will ensure sufficient liquidity from depositors is available for lending.

- 6. In crypto lending, it is crucial to understand whether the legal and/or economic ownership of assets is/are transferred to the borrower of the assets (i.e., another institutional unit) for the duration of the lending and the role of the platform in facilitating transactions. Two types of ownership are distinguished in macroeconomic statistics—legal ownership and economic ownership. Every asset has both a legal owner and an economic owner, although in many cases the economic owner and the legal owner are the same. Where they are not, macroeconomic statistics follows the economic ownership principle, which implies the economic owner of assets is the institutional unit entitled to claim the benefits associated with the asset by virtue of accepting the associated risks.
- 7. In the case of crypto lending, crypto assets are placed with the wallet of the borrowing unit, and the borrowing institutional unit has full control over those assets for the duration of the arrangement and can use them freely. Two perspectives are envisaged: (i) In the first case, 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; and (ii) the other alternative considers crypto lending in a similar way as other repo-type transactions such 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.
- 8. Generally, the centralized platforms offer fixed and flexible accounts to earn revenue on the crypto assets deposited with them. These accounts are known by different names such as interest-bearing accounts, earn programs, crypto earn. The platform can use the assets as it sees fit—liquidity management, lending etc. On the other hand, decentralized platforms provide flexible borrowing and lending options, but do not typically offer fixed-term accounts like centralized platforms.

<sup>&</sup>lt;sup>5</sup> In addition to crypto lending/borrowing accounts, these platforms typically offer a broad range of financial services centered around crypto assets such as crypto trading (in some cases including NFTs), crypto wallet, staking, tokens of their platform and loyalty programs.

<sup>&</sup>lt;sup>6</sup> In the case of centralized platforms, generally borrowers are allowed to transact in assets between accounts on the same platform (e.g., sending the borrowed funds to another user on the same exchange), but not outside the platform.

<sup>&</sup>lt;sup>7</sup> See for example Nexo Fixed term deposits. The balance limit for Bitcoins in the Base tier is 25,000 USD. If the lender's Loyalty level is Base and have 60,000 USD worth of Bitcoins in a fixed term, lender will be earning 4 percent annual interest on 25,000 USD, whereas the remaining 35,000 USD (above the balance limit) will be earning 2.5 percent annual interest.

<sup>&</sup>lt;sup>8</sup> In the case of decentralized platforms, the interest rates are typically determined algorithmically, based on supply and demand for each crypto asset.

9. Institutional units can borrow crypto assets from these platforms at an agreed rate of revenue/payment. Borrowing crypto assets from lending platforms generally requires depositing collateral with them that is equivalent to or higher in value than the crypto assets being borrowed. The collateral remains unavailable to the borrower until the crypto assets are returned. If the borrower fails to repay the loan, the collateral may be liquidated to cover the debt.

#### **OUTPUT OF CRYPTO LENDING PLATFORMS**

- 10. The crypto lending platforms intermediate between lenders and borrowers of crypto assets. However, the modalities of operation differ between centralized and decentralized platforms.
- 11. In the case of centralized platforms, they can 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. They lend crypto assets to borrowers at a higher rate of revenue and pay revenue at a lower rate to institutional units that deposit crypto assets with them. 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 (and not as financial auxiliaries who will facilitate the transaction without taking ownership of the assets) due to their role in managing and redistributing financial assets. <sup>10</sup> Then it is understood that they should be treated and classified as other financial intermediaries except insurance corporations and pension funds. Otherwise, they should be treated as financial auxiliaries on the lines of decentralized platforms (see paragraph 13).
- 12. 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. The implicit fee could be seen as working in a similar way as "implicit financial services on loans and deposits" or "FISIM" in the 2008 SNA/BPM6, in case such platforms are considered as financial intermediaries. Actual payment/revenue (as referred by the platform) on deposited assets and the assets lent (known as loans) can be seen as including both an income element and a charge for a service (i.e., the implicit fee). The platform may receive additional revenue through explicit charges such as transaction fees, origination fees, liquidation fees, custody fees, and premium services, as part of their custodial functions.
- 13. Unlike centralized platforms, decentralized platforms do not take custody of the crypto assets being lent. Instead, the smart contract temporarily locks them. The locked crypto assets are added to the lending pool and borrowers can take loan against it. All in all, decentralized platforms seem to facilitate lending between lenders and borrowers with the help of smart contracts. However, it does not seem to operate as direct peer-to-peer lending in which a lender is directly linked to a specific borrower. Instead, the platform seems to be pooling funds from multiple lenders and to use these pools to finance

<sup>&</sup>lt;sup>9</sup> While crypto assets are the most common form of collateral on crypto lending platforms, some platforms do allow fiat currency as collateral. Cash collateral could be classified as deposits or other accounts receivable/payable. See Chapter 5, *BPM7*/Chapter 14, *2025 SNA*.

<sup>&</sup>lt;sup>10</sup> In macroeconomic statistics, financial intermediaries are classified based on their economic activities rather than the risk profile.

<sup>&</sup>lt;sup>11</sup> The assets are temporarily inaccessible for other transactions. The smart contract enforces this lock and ensures that the crypto assets are only used according to the terms of the lending agreement.

the needs of multiple borrowers. <sup>12</sup> Decentralized platforms 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. These self-executing contracts automate the lending process, ensuring that the terms of the loan are met and that both parties' assets remain secure. Further, the assets on-lent or borrowed through the platform are not recorded on the platform's balance sheet. Therefore, the platform could be considered as an institutional unit similar to an investment fund manager. The spread between interest on loans and deposits could be treated as the main component of the output of these platforms similar to commissions earned by brokers. However, further investigation is required on how to account for this apparent implicit fee. In addition, the platforms may receive explicit charges such as transaction fee (e.g., depositing, withdrawing, or transferring assets), <sup>13</sup> loan origination fee, collateral liquidation fee, and others. Activities of decentralized platforms resemble those of financial auxiliaries.

#### RECORDING OF CRYPTO LENDING/BORROWING—PROPOSED OPTIONS

- 14. The following options are considered for recording the stocks/flows and revenue associated with lending/borrowing of 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 lending 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.

## **Option 1A**

15. The role of CAWLM in the financial system is largely influenced by the characteristics of CAWLM lending, especially through platforms (see paragraphs 4–13). Therefore, it is argued that the lending in CAWLM is treated as similar to lending in cash, even though the CAWLM itself is classified as a nonfinancial asset. Treating lending in CAWLM as lending in cash may be seen as a practical solution that helps align macroeconomic statistics recording with the real-world use of CAWLM in lending transactions. It acknowledges that the essence of lending in CAWLM is still a debt obligation, regardless

<sup>&</sup>lt;sup>12</sup> This also means that the total amount of deposits does not necessarily have to equal the total amount of loans, although the smart contracts will manipulate the interest rate in such a way that the two will align as closely as possible. Furthermore, it implies that the lenders are not facing credit risk vis-à-vis individual borrowers, but that this risk is borne by depositors as a whole (with the platform having several safeguards (including the overcollateralization) to minimize default risk.

<sup>&</sup>lt;sup>13</sup> Both the types of platforms charge transaction fees. However, decentralized platforms distribute these fees among liquidity providers and token holders, while centralized platforms typically retain a large portion of the fees for themselves.

of their classification. Further, by treating these loans similar to cash loans, the focus shifts to how loans function economically, rather than how the underlying asset is classified. This ensures that the loan transaction is captured within the financial account, aligning with traditional loan treatment. However, this approach requires addressing challenges related to volatility and valuation, ensuring that the economic implications of lending in CAWLM are adequately reflected in macroeconomic statistics. This treatment could be extended to securities lending and gold loans.

- 16. The term "funds" in the definition of loans <sup>14</sup> in macroeconomic statistics traditionally refers to the transfer of money, typically in the form of cash or deposits. However, as CAWLM become more integrated into financial systems, the interpretation of "funds" may evolve to include fungible assets other than cash and deposits including those with an uncertain value, particularly in the context of crypto lending. According to this interpretation, CAWLM serve a functional role like cash and similarly can easily be pooled and redistributed because of its fungible nature. <sup>15</sup> One can argue that the economic substance of lending CAWLM is equivalent to lending in cash and the corresponding financial obligations and receivables. Moreover, CAWLM (like fiat currency) is a bearer asset implying that the institutional unit which holds the private keys of the wallet has full control and ownership over it. When CAWLM is lent to another institutional unit, the ownership usually transfers to that unit. The original owner no longer directly controls the CAWLM on-lent. Instead, it holds a claim against the borrowing unit for the return of an equivalent amount of CAWLM (plus interest/revenue).
- 17. It may be argued that treating the lending in CAWLM as lending in cash is not appropriate due to its limited use as a medium of exchange and the consideration of CAWLM as nonfinancial assets. Moreover, without being widely used as a medium of exchange, CAWLM cannot be universally accepted like cash and therefore, equivalent treatment of lending in CAWLM and cash goes against the basic principles of macroeconomic statistics regarding how lending and borrowing among institutional units are measured. More importantly, adopting a different treatment for crypto lending would introduce a different treatment with respect to securities lending, repurchase agreements and other types of non-financial asset loans (like gold loans<sup>16</sup>, oil lending<sup>17</sup>, precious metals leasing<sup>18</sup>, etc.).
- 18. There is an important difference between lending/borrowing through centralized platforms taking ownership of the CAWLM and decentralized platforms which provide some managerial services without taking on ownership of the assets. For further details, see the **Annex**.

<sup>&</sup>lt;sup>14</sup> Loans are defined as "financial assets that are created when a creditor lends **funds** directly to a debtor and are evidenced by documents that are not negotiable" (see the <u>Glossary of Terms and Definitions in Macroeconomic Statistics</u>).

<sup>&</sup>lt;sup>15</sup> In that respect, they are quite different from most other types of non-financial assets such as land and machinery that are not easily interchangeable. The same goes for non-fungible financial assets such as securities.

<sup>&</sup>lt;sup>16</sup> Gold loans help in managing liquidity and hedging against price fluctuations: the borrower receives gold and agrees to return it with interest.

<sup>&</sup>lt;sup>17</sup> In the oil industry, companies may lend oil to each other, especially in times of supply shortages or logistical issues.

<sup>&</sup>lt;sup>18</sup> Similar to gold, other precious metals like silver, platinum, and palladium can be leased to manufacturers who need them for production. This allows companies to use the metals without having to purchase them outright.

# **Option 1B**

- 19. The process of lending/borrowing CAWLM, especially through platforms, may resemble securities lending and the related revenue as the interest income receivable by the owners of certain kinds of financial assets. Crypto asset lending may be done with and without cash collateral (provision of liquidity). If without cash collateral, the revenue is recorded as interest and no transaction in CAWLM is recorded in the capital account and no changes are made to the balance sheets of the parties involved, similar to the treatment of securities lending. This is so because while the legal ownership of the securities/crypto assets is transferred to the borrower of securities/crypto assets, the economic ownership remains with the original owner. <sup>19</sup> Implying that no transaction in those securities is recorded in the financial account and no changes are made to the balance sheets of the parties involved, both centralized and decentralized platforms will be treated as financial auxiliaries.
- 20. In this manner, revenue from crypto lending could be recorded as interest as a convention for CAWLM, on the lines of fees for securities lending and (monetary and nonmonetary) gold loans, which are treated as interest (paragraph 11.68, *BPM6*). Drawing parallel with securities lending is relevant in this context as the institutional unit that lends CAWLM remains the economic owner as is the case with units lending securities.
- 21. Further, the institutional units that borrow CAWLM (e.g., crypto exchanges/platforms) can on-lend those assets to other institutional units as they are the legal owners of the borrowed assets. This option would maintain consistency with conventions adopted in the current manuals for cases like securities lending or gold loans until a more holistic review of the treatment for similar transactions can take place (the issue is to be placed on the SNA/BPM research agenda).
- 22. With this option, the link between income and related stocks will not be maintained if there is no provision of liquidity/cash. As in the case of securities lending without cash collateral, the borrower will record investment income debit/expenditure but no financial position.

#### Option 2

23. As CAWLM are classified as nonproduced nonfinancial assets, it could be argued that the lending of CAWLM is akin to putting them at the disposal of another institutional unit under a resource lease. Consequently, the revenue resulting from this arrangement may be recorded as rent. Such treatment will be consistent with the treatment applied to nonproduced nonfinancial assets other than CAWLM, <sup>20</sup> but it requires modification to the current definition of rent. The main argument for modifying the definition of rent is that while the classification of nonproduced nonfinancial assets has been expanded by including CAWLM, the related income associated with nonproduced nonfinancial assets has not followed suite. Recording the lending as a resource lease and related revenue as rent would maintain the link between

<sup>&</sup>lt;sup>19</sup> If cash collateral is exchanged, securities lending is treated as a repurchase agreement (i.e., as a collateralized loan), again with no transactions/positions in securities being recorded. This treatment is adopted because the original owner is still subject to the risks or rewards of any change in the price of the security.

<sup>&</sup>lt;sup>20</sup> There was significant support for expanding the definition of property income to include a subcategory for payments for nonproduced nonfinancial assets other than natural resources, preferably referred to as "rent on other nonproduced nonfinancial assets". (in the context of discussion on marketing assets—see the <u>SOD</u> from March 2022 joint AEG/BOPCOM meeting).

income and the related stocks.<sup>21</sup> If the treatment as rent were to be the preferred option, the definition of rent could be modified by deleting "for use in production" from the current definition, as indicated below.

Income receivable by the owner of a nonproduced nonfinancial assets (the lessor or landlord) for putting the assets at the disposal of another institutional unit (a lessee or tenant) for use in production.

24. Further, if the on-lent<sup>22</sup> of borrowed CAWLM to other institutional units takes place, it could be recorded as a resource lease and the revenue receivable from such arrangement could be recorded as rent, provided the current definition of rent is modified as indicated above and the following adjustments (text in bold) are made to the guidance on sub-leasing from paragraph 11.90, *BPM6*.

If a lessee subleases a non-produced nonfinancial asset including on-lent crypto assets without a corresponding liability, the income receivable from the subleasing or on-lending should be recorded as rent, as should the income payable to the owner of the non-produced nonfinancial asset by the owner of the lease.

- 25. Moreover, in the case of lending channeled through centralized crypto lending/borrowing platforms, it would be appropriate to record the total revenue as consisting of two distinct components: (i) implicit service charge payable to the platform; and (ii) rent excluding the service charge for the deposited assets (see paragraph 7). However, splitting the total revenue into these two components may be challenging in practice and will require further guidance.
- 26. It may be argued that treating the CAWLM lending arrangement as a resource lease may not be appropriate considering that these assets are fungible. Further, recording the revenue from lending as rent may not be conceptually sound as the current definition requires the assets to be used in production, which is not the case for CAWLM. Further, the concept of rent may be considered narrow in the context of crypto lending as one of the key functions of the platform (i.e., liquidity management) is not captured. This contrasts with other nonfinancial assets under resource lease as they are intended for production and not fungible (implying that the same asset needs to be returned after the lease). In addition, as emphasized previously, the borrower has full custody and ownership of the assets borrowed.

# Option 3

- 27. Lending of CAWLM to another institutional unit is treated as provision of services, and related revenue as a payment for those services. Such services could be financial services, trade-related services, operating leasing services, other business services or part of a new services category.
- 28. If the CAWLM assets lent to platforms are considered as providing support to the functioning of the platform, then one can argue that the lending activities are simply other business services. Without these services, the platform will not be able to provide the necessary facilities for crypto transactions. Considering that the activities relating to crypto assets and their use has been continuously evolving, the treatment as services ensures a uniform recording for all types of revenues associated with similar transactions (e.g., crypto staking, cloud, and pooled mining) and could be easily implemented.

<sup>&</sup>lt;sup>21</sup> For CAWLM, stocks are held by domestic institutional sectors (given that stocks of nonproduced nonfinancial assets are not part of the international investment position).

<sup>&</sup>lt;sup>22</sup> The re-lending of borrowed CAWLM.

29. It may be argued that recording of lending as provision of services may not be appropriate because these arrangements will not hold true when the assets are on-lent, which is the practice with crypto lending. Services "cannot be traded separately from their production. By the time their production is completed, they must have been provided to the consumers." (paragraph 6.17, 2008 SNA). Further, if households are lending CAWLM, a treatment of services would imply that households are considered service providers (since CAWLM lending is classified as service production), which is unwarranted. Moreover, due to the high charges (i.e., interest) involved in crypto lending/borrowing, categorizing everything as services would probably lead to an overestimation of services with an unwanted impact on GDP. It is also important to note that services could only be provided in relation to produced assets (e.g., R&D, and other IPPs).

#### **RECOMMENDATIONS**

- 30. As discussed above, lending of nonproduced nonfinancial assets does not properly align conceptually with the current macroeconomic statistics frameworks. The Note presented possible options with pros and cons based on the conceptual recommendations provided in the SNA/BPM frameworks. In addition, financial reporting standards are still evolving, and businesses do not provide clear and uniform disclosures when presenting crypto asset lending and other related transactions. Overall, the drafting team acknowledges that the recording of crypto asset lending and borrowing is a very complex issue.
- 31. Taking into consideration the pros and cons of the four options, the drafting team considers that option 2 and option 3 are not appropriate for the reasons provided. The drafting team considers that Options 1A and 1B have equally supporting and balanced arguments for treating crypto lending.
- 32. In order to reach a conceptually sound and practically feasible treatment, current concepts/definitions of assets, revenue relating to crypto activities may require further elaboration. Considering that the treatment of CAWLM is retained as part of the SNA/BPM research agenda, the drafting team proposes including the treatment of CAWLM lending in the research agenda, irrespective of the recommendation at this stage. The research on this issue may also cover the recording of lent/borrowed assets in the balance sheets of institutional units involved depending on the agreed treatment of revenue; and treatment of on-selling the lent/borrowed crypto assets and whether negative asset positions of CAWLM (i.e., nonproduced nonfinancial assets) can be recorded on balance sheets, as is done with the on-selling of gold or securities temporarily acquired through gold loans or securities lending/repurchase agreements. Revenues from securities lending and gold loans should also be included in the research agenda to enable a holistic discussion on this type of revenue.

## **Questions for AEG/BOPCOM**

- 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?

# Annex. Lending/Borrowing Channeled Through Platforms

# Centralized platforms

In the case of centralized platforms (i.e., off-chain lending) when the economic ownership is assumed to be transferred to the platform, lending/borrowing is considered as taking place between the lender and platform and between the platform and the borrower of CAWLM. Lending CAWLM is treated as lending in cash for recording purposes, with CAWLM classified as a nonfinancial asset. The lender records in the financial account a loan receivable (a financial asset) denominated in units of CAWLM rather than fiat currency and decreases its CAWLM holdings. The platform, in turn, records a CAWLM asset and a loan payable denominated in CAWLM units. Further, revenue/payment receivable by the lender from platform is recorded as interest income recorded in cash. The loan repayment entries reflect both the financial liability in CAWLM units and any changes in the value of CAWLM over time. This method ensures that the lending transaction is properly captured within financial accounts, even though CAWLM remains classified as a nonfinancial asset and the loan is denominated in crypto units.<sup>23</sup> Similar recording is applicable in the case of borrowing from the platform. If the centralized platform doesn't take ownership of the crypto assets, the following treatment of decentralized platforms equally applies to them.

# **Decentralized platforms**

In the case of lending through decentralized platforms (i.e., on-chain lending), lending in CAWLM is considered as taking place between crypto owner and borrower facilitated by the platform (see paragraph 13). The recording approach discussed above for centralized platforms between lender and borrower is valid for lending/borrowing through a decentralized platform. However, no loan assets/liabilities should be recorded against the platform. Whether the lending takes place on a centralized or decentralized platform, the recording of CAWLM-denominated loans follows the same principles.<sup>24</sup>

<sup>&</sup>lt;sup>23</sup> To align crypto-denominated loans with other balance sheet items, they are revalued regularly into fiat currency based on current market prices. This ensures that while the loan remains denominated in crypto units, it is presented in fiat terms on the financial account/balance sheet, consistent with other items. Revaluation adjustments handle any gains or losses due to crypto asset volatility, maintaining accurate and transparent financial reporting.

<sup>&</sup>lt;sup>24</sup> It seems to have all the characteristics as a deposit; however, this cannot be considered as a 'deposit' as it doesn't concern deposit-taking corporations.