Forty-Fifth Meeting of the
IMF Committee on Balance of Payments Statistics

Bangkok, Thailand
October 28–30, 2025

BOPCOM—25/14
For discussion

Compilation Guidance on Crypto Assets (Chapters 3 and 4)

Prepared by the Statistics Department

INTERNATIONAL MONETARY FUND

Compilation Guidance on Crypto Assets

Chapter 3. DATA SOURCES AND COMPILATION METHODS[1]

A. INTRODUCTION

1. This chapter presents the range of data sources available for compiling crypto asset statistics, reflecting the diverse and complex nature of crypto-related activities. It covers administrative and supervisory data, financial statements of entities such as mining companies and crypto exchanges, alternative commercial and blockchain-based data, and possibilities for international data sharing. By exploring these data sources and their respective strengths and limitations, compilers may select the most suitable approaches to produce consistent and reliable statistics on crypto assets considering the institutional and legal frameworks for statistical reporting in their countries.

2. The remainder of this chapter is organized as follows. Section B describes the main administrative data sources, including those derived from regulatory, tax, and international transactions reporting systems (ITRS). Section C outlines the use of financial statements of mining companies, stablecoin issuers, and crypto exchanges for measuring flows and stocks of crypto assets. Section D discusses the use of alternative (commercial) data sources, and Section E focuses on data sources related to Nonfungible tokens (NFTs). Section F presents data sources and compilation approaches relevant to the Data Gaps Initiative version 3 (DGI-3) Recommendation 11 Task Team templates on stablecoins and other crypto assets. Section G discusses the importance of international data sharing to enhance consistency, including coverage of crypto asset statistics. In addition, annexes provide model survey questionnaires on mining companies (Annex 3.2), stablecoin issuers (Annex 3.4), crypto exchanges (Annex 3.6), and creators of NFTs (Annex 3.9); questions on fungible crypto assets and NFTs for household and enterprise surveys (Annex 3.8); mapping of key financial statements items on crypto assets to *BPM7*/*2025 SNA* classifications (Annex 3.7); compilation methods for estimating crypto holdings by USA/non-USA residents and resident institutional sectors (Annex 3.5); and deriving transactions and revaluations from positions data (Annex 3.3).

B. ADMINISTRATIVE DATA SOURCES

3. This section covers sources of data on crypto assets collected by government institutions as a by-product of their core functions. Examples include data from tax authorities, financial regulators, the International Transactions Reporting System (ITRS), and government records on crypto asset losses, thefts, and seizures.

4. The sources described in this section may be used to compile various external sector and national accounts statistics items on crypto assets in accordance with the *BPM7*/2025 SNA framework. They can also supplement data from financial reports or targeted surveys and may be used to validate information collected from other sources.

---

[1] Prepared by Venkat Josyula, Emmanuel Manolikakis, Mher Barseghyan, Rita Mesias, and Pawel Pisany (IMF Statistics Department)

Crypto Asset Service Providers

5. Crypto asset service providers (CASPs) are institutional units that provide crypto-asset-related services such as custody of crypto assets, exchange services for buying or selling crypto assets, digital wallet operations, or payment processing.[2] In several countries, they are required to register with a designated agency, such as the central bank, securities regulator, or ministry of finance, and provide necessary operational details. Typically, a unit may register to provide one or more of those services. Regulatory agencies generally publish lists of CASPs on a regular basis. These lists typically cover both domestically headquartered exchanges and local branches or subsidiaries of foreign-owned platforms. For example, in the United States, crypto exchanges register with the Financial Crimes Enforcement Network (FinCEN) as money services businesses and comply with ongoing anti-money laundering (AML/xx(CFT) obligations, including suspicious activity reports. Some CASPs may also fall under the jurisdiction of the Securities and Exchange Commission (SEC) or the Commodity Futures Trading Commission (CFTC), depending on their activities, and could face additional disclosure obligations. National statistical offices and central banks should coordinate with the relevant agencies to compile the list of CASPs and other Virtual Asset Service Providers (VASPs) for potential inclusion in business registers.

Regulatory Data on Crypto Assets

6. In the absence of dedicated surveys or established statistical reporting systems, regulatory reporting by CASPs offers a practical starting point for compiling crypto asset data under *BPM7* and *2025 SNA* frameworks. Unlike traditional financial filings, regulatory reporting encompasses a wide array of disclosures—including transaction-level data, AML reports, operational metrics, licensing and compliance documentation, and financial statements. While these reports are primarily designed to support investor protection, market oversight, and compliance enforcement, they also offer valuable insights into the structure, usage, and cross-border flows of crypto assets, which can be harnessed for statistical purposes. **Box 3.1** provides details of the United Kingdom's crypto asset regulatory framework.

7. These regulatory datasets mostly provide details on crypto asset issuance, transfers, holdings, and counterparty relationships, making them highly relevant for macroeconomic analysis. They can be used to estimate institutional and corporate holdings, track cross-border flows, classify crypto entities within financial accounts, and assess financial interconnectedness and systemic risk. However, regulatory filings often do not explicitly distinguish between crypto assets with and without corresponding liabilities. Statistical compilers must infer these distinctions based on asset characteristics, issuer obligations, and transaction patterns to align with *BPM7* and *2025 SNA* classifications. Further, they may not provide sector and residency of the crypto asset holders and/or details of the entities involved in crypto transactions.

[2] According to the Financial Action Task Force (FATF) definition, CASPs include crypto exchanges, custodians, wallet providers, crypto Payment processors, and Issuers of crypto assets. CASPs are subject to regulatory oversight in many jurisdictions, especially for anti-money laundering (AML), counter-terrorism financing (CTF), and tax compliance purposes.

Box 3.1. UK Crypto-Asset Regulatory and Reporting Framework

In the United Kingdom, crypto-asset businesses, including exchanges, wallet providers, and custodians, must register with the Financial Conduct Authority (FCA) under the AML regime if they qualify as "crypto asset firms." This registration requirement covers both UK-headquartered firms and local branches of foreign platforms, effectively bringing all VASPs operating in the UK under regulatory oversight. The FCA maintains a public register of such firms, ensuring transparency and providing a reference list of active VASPs.

Beginning in 2026, UK-based reporting crypto-asset service providers (RCASPs) will also be subject to annual reporting obligations under the OECD's Crypto-Asset Reporting Framework (CARF), with the first submissions due to HM Revenue & Customs (HMRC) by 31 May 2027 for transactions during the 2026 calendar year. The information to be reported includes:

- User identification data: full legal name, date of birth, address, country of residence; National Insurance number or Unique Taxpayer Reference for UK residents, and tax identification numbers for non-UK users.
- Transaction-level data: transaction value, number of units, type of crypto asset, and transaction type (e.g., exchange, transfer).
- Due diligence and record-keeping: documentation of compliance steps, maintained for at least five years.
- User notifications: confirmation that their information will be collected and reported.

From a statistical perspective under *BPM7/2025 SNA*, these annual RCASP reports provide a structured and standardized source of data on crypto assets. National statistical offices and central banks can use the FCA and HMRC data to compile business registers, track transaction volumes, and analyze trends in crypto asset activity, improving coverage and quality of crypto-related economic statistics compared with more fragmented transaction-based reporting systems in other jurisdictions.

Source: Check if you'll need to report cryptoasset data to HMRC

8. Despite its potential, leveraging regulatory data for statistical purposes presents some challenges. Coverage gaps persist due to the exclusion of unlicensed or decentralized entities. More importantly, specific details may be excluded from regulatory filings to protect confidentiality. These restrictions can limit access to detailed transaction-level data. Jurisdictional differences in reporting standards hinder harmonization and comparability within the economy and internationally. Timeliness is also a concern, as many reports are periodic and may lag market developments. Moreover, regulatory approaches vary widely, resulting in inconsistencies in scope, definitions, and data availability.

9. **Section B.2, Chapter 4** explains the experience of Eesti Pank in compiling the data on crypto assets based on the reports from CASPs.

Tax Data on Crypto Assets

10. As crypto assets gain traction globally, countries are developing tax frameworks to regulate and monitor digital asset transactions more closely. These frameworks not only serve for revenue collection purposes but also provide insights into crypto asset transactions and income, particularly from resident households and corporations — sectors that are often difficult to survey. When anonymized and aggregated, such data can support:

- Assessing Adoption and Market Activity
  The number of taxpayers reporting crypto activity serves as a proxy for adoption levels. Reported transaction volumes offer a baseline for estimating market turnover, while declared asset values may hold importance for assessing net worth.

- Estimating Household Income and Consumption
  Reported income from crypto-related activities (e.g., mining, staking) can refine estimates of household income, consumption, and savings. This enhances the measurement of savings and use of income in the domestic economy.

- Tracking Cross-Border Financial Flows
  Taxpayer disclosures of foreign-held crypto assets or transactions with non-residents provide a partial but critical view of cross-border flows, supporting compilation of the financial account in the BOP.

11. While the tax regimes generate records of crypto-related income and transactions, the ability to derive comprehensive crypto flows and stocks held by households or businesses may be constrained. For example, the U.S. tax data captures the flow of transactions and realized gains but does not provide information on wallet balances or total crypto holdings. In Canada, taxpayers must report investment income from crypto trades, but there is no standalone requirement to disclose total holdings unless triggered by foreign asset rules. Similarly, in India, although income tax data provides disposals and related gains, there is no direct requirement for households or businesses to declare total crypto balances held domestically.

12. Using tax data for macroeconomic statistics purposes has certain limitations. It provides a flow of income or realized gain/loss, but not the flow of the asset transactions itself, which is required for the financial account. Further, tax data may not capture peer-to-peer transfers, transactions on decentralized exchanges, and other non-custodial activities.[3] The data also provides no information on total stock (holdings) of crypto assets, which is critical for compiling sectoral balance sheets and the international investment positions (IIP). Moreover, the data lacks timeliness, as income tax reporting occurs annually. Its scope and underlying methodology can vary significantly across countries, due to different rules, unharmonized tax laws, and divergent compliance levels. Initiatives that aim at standardizing and cross-border sharing tax information such OECD's Crypto-Asset Reporting Framework (CARF) may at some point in the future enable broad use of tax data for macroeconomic statistics compilation. **Box 3.2** outlines how CARF can be utilized in the compilation of macroeconomic statistics.

[3] Access to tax data varies across different economies and depends on the MOUs between the tax authorities and the NSOs/Central Banks.

Box 3.2. Leveraging OECD Crypto-Asset Reporting Framework (CARF) for Macroeconomic Statistics

The OECD's Crypto-Asset Reporting Framework (CARF) is an international standard designed to enhance tax transparency for crypto assets. It mandates standardized reporting of crypto transactions by service providers, enabling tax authorities to access detailed data on acquisitions, disposals, and transfers. While the primary objective is tax compliance, CARF data can also be leveraged to support macroeconomic statistics. It could serve as a complementary source for compiling *BPM7* and *2025 SNA*-based statistics on crypto assets. Aggregated CARF data may allow monitoring trends in crypto adoption and integration into the statistical frameworks. Further, it could enhance the ability of statistical agencies to cross-check surveys and other source data for improved accuracy.

Key Features

CARF requires Reporting Crypto-Asset Service Providers (RCASPs) to report:

- Acquisitions and disposals of crypto assets
- Exchange transactions (crypto-to-crypto, crypto-to-fiat)
- Transfers to and from wallets
- Valuation and timestamps of each transaction
- Identification of users and wallet addresses

Challenges in Using CARF Data

- Data Privacy: Access may be limited due to confidentiality rules, requiring anonymization or aggregation.
- Coverage Gaps: Not all crypto transactions are captured, particularly on non-compliant or decentralized platforms.
- Valuation Issues: Prices are volatile and differ across exchanges, complicating consistent measurement.
- Classification Complexity: Distinguishing between financial and non-financial crypto assets can be challenging.
- Timeliness: Delays in reporting or international data exchange can affect the currency and usability of statistics.
- Standardization Across Jurisdictions: Different implementation timelines and interpretations may affect comparability.

Source: OECD Crypto Assets Reporting Framework

International Transactions Reporting System (ITRS)

13. Where available, the International Transactions Reporting System (ITRS), can serve as a useful source for capturing cross-border transactions in crypto assets within the framework of *BPM7*. Originally designed to record cross-border financial flows, including investment income, remittances, and transfers. In some countries, this system has been enhanced to capture crypto assets related transactions.

14. By recording cross-border payments processed through the domestic banking system, ITRS can provide information on the value, currency, date, and counterparty country of transactions involving crypto assets. For example, purchases of Bitcoin from abroad by resident entities may be recorded as inflows, while sales to nonresidents can be captured as outflows. When appropriate codes are included for these items in ITRS, such data can support the classification of crypto transactions in accordance with the methodological standards of *BPM7* and *2025 SNA*.

15. Some countries have already taken steps to incorporate crypto-related categories into their ITRS frameworks (e.g., Brazil and El Salvador). Dedicated reporting codes have been introduced for the purchase and sale of crypto assets, as well as for crypto-related services. These developments demonstrate the adaptability of existing systems to reflect the increasing significance of crypto assets in cross-border activities.

16. Nevertheless, important limitations remain. First, ITRS records only those transactions intermediated by domestic banks, excluded are peer-to-peer trades and those conducted through accounts in overseas crypto exchanges are excluded. Second, ITRS captures payment flows but not asset positions, as a result, they need to be complemented by other sources to measure the crypto holdings of residents. Third, data quality depends heavily on the accuracy of coding and reporting by banks, which may not always distinguish between different types of crypto assets, especially between those with liabilities (such as stablecoins) and those without (such as Bitcoin or Ether). Finally, transactions through corporate accounts held abroad often bypass the domestic banking system and thus fall outside ITRS coverage.

17. While ITRS alone cannot provide a complete picture of cross-border crypto asset transactions, it offers a structured and timely dataset that can be leveraged for compiling *BPM7* compliant statistics. When integrated with complementary data sources, ITRS contributes meaningfully to the development of a robust and holistic measurement of cross-border transactions in crypto assets.

18. Section x, Chapter 4 explains the experience of Central Bank of Brazil in compiling the data on cross-border transactions in crypto assets based on the ITRS.

Crypto Assets Loss, Theft, and Seizures[4]

19. Crypto asset seizures have become increasingly common as law enforcement agencies around the world enhance their capabilities to combat illicit financial activities. Several high-profile cases have been reported across jurisdictions, reflecting the growing importance of digital asset enforcement. While the United States has led many high-profile seizures of crypto assets, numerous other countries have also undertaken significant seizures. **Annex 3.1** provides data on prominent seizures for selected countries gathered from different news reports at the time of drafting this chapter. Apart from these reports, data on seizures are not systematically available for incorporating in the national accounts and balance of payments.

20. Data on hacking/theft/loss are generally not maintained in a centralized government database. Instead, it is primarily compiled and analyzed by private blockchain analytics firms like Chainalysis. Such companies use sophisticated tools to trace the flow of stolen funds on the blockchain, providing the most

[4] This is included as part of the administrative data sources, as most of the sources on this item are based on the reports of government agencies at this stage.

comprehensive and detailed information available. Law enforcement agencies, such as the U.S. Federal Bureau of Investigation (FBI), also maintain internal records for criminal cases, while academic researchers and journalists often aggregate publicly available information on major events.

21. Dat to collect these data from law enforcement, financial intelligence units, customs authorities, judicial institutions, and blockchain analytics firms. Interagency protocols for data sharing are essential to ensure that these activities, especially those with cross-border implications are systematically captured and appropriately classified.

22. Section E, Chapter 2 (including Box 2.5) explains that loss, theft, hacking, and seizures of crypto assets are not considered transactions because they lack mutual consent and are therefore treated as other changes in volume in balance of payments/national accounts.

C. FINANCIAL REPORTS

Publicly available financial reports of entities engaged in crypto-related activities—such as mining, stablecoin issuers, crypto exchanges, and corporates holding crypto assets—provide important data on flows and stocks of crypto assets as well as associated income and expenses. Although typically prepared on a consolidated group basis**,** these statements are a valuable source for assessing the domestic and cross-border activities related to crypto assets.

Crypto Mining Companies

23. This sub-section presents guidance on the compilation of output, flows and stocks of crypto assets of mining companies based on publicly available financial statements of large multinational enterprises (MNEs) engaged in mining. These financial statements offer insights into mining and other activities, the financial flows, and positions including the flows/stocks of crypto assets. These MNEs operate through subsidiaries in different countries, and their financial statements provide a consolidated perspective for the group as a whole.

Output and Intermediate Consumption

24. Crypto mining companies (e.g., Bitfury, Bitdeer, ClearSpark) typically earn revenues from two sources: block rewards (newly mined crypto assets) and transaction fees. In some cases, data on these components are available separately by subsidiary, which allows a geographical distribution of revenues (mining activity). However, distinctions between resident and non-resident sources of transaction fees are often missing, and no systematic allocation of newly mined Bitcoins to specific countries is available. In addition to self-mining, most of these companies also provide hosting and mining services for other entities. This includes offering access to their custom mining hardware and data center solutions. While details on these additional revenues are available, in some cases, the information is not sufficiently granular at the subsidiary level, making it impossible to assign production accurately to the economy. More importantly, break-up of revenue from residents and nonresidents is mostly not provided. While the output from mining/validation services and related activities are recorded as the primary output of these companies, manufacture of capital equipment or software solutions for mining should be recognized as part of their secondary outputs.

25. The main input into mining is electricity, which accounts for a substantial share of intermediate consumption. Some financial statements provide revenue and expenses by product lines (e.g., self-mining, cloud hosting, general hosting) with the split of expenses into electricity, depreciation, and

other costs. Others present details on expenses such as rent, wages, sales and general administration costs, without separate data on electricity consumption. Proxy approaches may be needed to derive electricity usage in such cases. The estimates based on the data from similar mining companies could be the best proxy. For example, data from Bitdeer shows that electricity consumption accounts for 25 percent of the total expenditure for each business line including mining. Operational metrics such as hash rate, number of machines, and energy efficiency indicators can also be useful, but such data may not be readily available in practice. Compilers must carefully distinguish between expenses that represent intermediate consumption, such as electricity and those that should be excluded, such as wages and salaries or provisions for impairments, holding gains/losses, etc. Overall, details at the subsidiary level are required to derive accurate estimates of intermediate consumption.

Flows and Stocks

26. Generally, financial statements do not contain all the information needed to derive transactions and other flows. The Cash flow statement provides some information as do the accompanying notes, however compilers still need to rely on changes between opening and closing stocks and apply certain methodologies to derive revaluations and other volume changes from the stock differences. See Section E and Box 2.6, Chapter 2 for discussion on the recording of other changes in assets/liabilities of crypto assets and numerical example on the recording of revaluation of crypto assets.

27. On the balance sheet, crypto assets appear under categories such as “Digital Valuables,” covering Bitcoin and other crypto assets held as well as lending denominated in Bitcoins. Liabilities can include borrowings denominated in Bitcoin, with disclosure of outstanding amounts and principal. Limited information is usually available on the revaluations of Bitcoin holdings.

28. In addition, some companies provide Bitcoin movement statements, which tracks receipts and payments denominated in both monetary units and Bitcoins. Examples of receipts include Bitcoins received through mining-related rewards and fees, hardware and software sales, proceeds from joint ventures, and shareholder loans received in Bitcoin. Payments in Bitcoins typically include consulting expenses, salaries, and shareholder loans paid in Bitcoin. However, breakup of receipts/payments by residents and nonresidents as well as by subsidiaries are not available.

29. Regarding Bitcoin lending/borrowing, compilers should follow the recording guidance provided in Section G, Chapter 2, irrespective of the recording in the balance sheets of mining companies mentioned above. Implying that for crypto assets on lent/borrowed (in this case, Bitcoins), the only item that should be recorded in the national accounts/balance of payments is the interest income receivable/payable in Bitcoins, as explained in **Box 2.8**. No transaction in those crypto assets is recorded in the capital account and no changes are made to the balance sheets of the parties involved.

30. Although financial statements of crypto mining entities are helpful in measuring their output, intermediate consumption, and assets/liabilities in crypto assets, they often lack the granularity needed for direct incorporation into the national accounts and external sector statistics of the countries involved. However, these statements may help compilers identify potential crypto asset activity, prompting further investigation. If the activity is believed to occur within the economy, additional sources such as tax data may provide valuable support in confirming and quantifying the activity.

- In the short term, compilers (that have access to no other data sources except the group level financial statements) are advised to apply proxy allocation methods to generate country-level estimates from

consolidated reports, while documenting the assumptions used. Collaboration with international organizations can help to harmonize approaches, ensuring greater comparability across countries.

- In the medium-term, efforts should be made to collect data from the units engaged in crypto mining using standardized templates through targeted surveys. Such templates should request country level data from the local subsidiaries on output, input costs, and crypto asset flows/stocks as well as a resident/non-resident breakdown of revenues. **See Annex 3.2 for a model survey questionnaire for collecting data from crypto mining companies.** National statistical offices and central banks may need to work closely with regulators, accounting bodies, and companies themselves to encourage improved disclosure practices and appropriate reporting to the targeted surveys.

Stablecoin Issuers

31. This sub-section provides guidance on the compilation of financial flows and stocks as well as income and expenses of stablecoin issuers based on the publicly available financial statements of large issuers (such as Tether and Circle[5]). Financial statements are generally available for the group as a whole including the subsidiary that issues stablecoins. In the case of Tether, Tether International Limited and Tether Limited are the companies which issue Tether tokens; data on both are included in the consolidated group report.

Assets and liabilities

32. Financial statements typically include information on assets and liabilities for the group including the reserves backing stablecoins and liabilities on account of stablecoins in circulation. Issuers such as Tether and Circle publish periodic reports showing the composition of their reserves,[6] which include U.S. Treasury bills, other sovereign securities, corporate bonds, repos, money market funds, and cash. In addition, Bitcoins and precious metals are included in their assets. As these are not financial assets in BPM/SNA, they should be recorded as part of the nonfinancial balance sheet (and should not be recorded in the IIP). These disclosures, though not always granular, allow compilers to classify assets into appropriate instruments. However, their classification into functional categories (i.e., direct/portfolio/other investments) requires certain assumptions. On the liabilities side, the outstanding supply of stablecoins is reported, often broken down by type of coin (e.g., USDT, EURT).

33. Information on net equity, changes in equity, and sometimes dividend distributions are also available, supporting the compilation of direct investment positions where the stablecoin issuing company is owned by nonresidents. However, important gaps remain. The residence of counterparties on the asset side is rarely disclosed—for example, repos and money market fund investments are reported without identifying the domicile of issuers. On the liability side, the residence of stablecoin holders is unknown, creating the same challenge that arises with the holders of debt securities. The residency of holders of stablecoins may be approximated using mirror data from major exchanges and custodians, or, as in the case of Tether now headquartered in El Salvador, by assuming that the overwhelming share of liabilities is held abroad. This is a plausible assumption given the magnitude of the liabilities and the economy's income/wealth.

[5] U.S. financial technology company that issues and manages the USD Coin (USDC) stablecoin in partnership with Coinbase.

[6] Reserves mainly back the issuance of stablecoins rather than other liabilities.

Financial flows

34. Financial statements provide information on changes in the levels of assets and liabilities across reporting periods. However, they do not separate transactions from revaluations effects, nor do they report transactions and other flows by instrument, maturity, or residency. For example, an increase in reported U.S. Treasury bill holdings could reflect either new purchases (transactions) or price appreciation (revaluations). In such cases, compilers can derive transactions indirectly from positions by adjusting for revaluation effects using observable market indices, such as the U.S. Treasury bill or corporate bond indices (**Annex 3.3** provides indicative steps for deriving transactions and price changes from the positions data using the financial statements data for Tether). Similarly, changes in the circulating supply of stablecoins can be used to estimate issuance and redemption flows, adjusted where necessary for valuation changes (see Box 2.6 for a numerical example on the recording of revaluation of crypto assets).

Income and expenses

35. For output and earned income from stablecoins, the available information is even more limited. The financial statement does not include an income statement, only financial results are reported. Stablecoin issuers publish aggregate financial results—net profits or losses—and sometimes the dividends declared. This allows compilers to identify reinvested earnings by reconciling net profit with dividends and deduce undistributed earnings. However, no detail is provided on the allocation of income by instrument, currency, or counterparty, nor are operating expenses disclosed to record under services. In the absence of detailed data, compilers may apply benchmark yields to the reported composition of reserves—for instance, using prevailing yields on short-term U.S. Treasury bills to estimate interest income on reported holdings. Aggregate income can also be proportionally allocated across instruments according to their reported shares and observable yields.

36. In sum, financial statements of stablecoin issuers are a valuable starting point but cannot by themselves deliver all the data needed for compiling comprehensive national accounts and external sector statistics relating to them.

- In the short term, compilers will need to combine available disclosures with proxy methods: deriving transactions from positions using market indices, applying benchmark yields to estimate income, and using mirror or survey data to allocate liabilities by residency.
- In the medium term, however, progress depends on the development of standardized reporting templates for stablecoin issuers that would require disclosure of assets and liabilities by instrument, currency, maturity, and residency, as well as income flows and operating expenses. **See Annex 3.4 for a model questionnaire for collecting data from stablecoin issuers.** Such templates could be linked to regulatory initiatives such as the Guiding and Establishing National Innovation for U.S. Stablecoins of 2025 (GENIUS Act of 2025),[7] ensuring consistency between supervisory and statistical data requirements. Closer cooperation with regulators, supervisors, and major exchanges would also strengthen the reliability of residency and sectoral allocation of stablecoin holdings.

[7] Refer to the following webpage for complete details: https://www.congress.gov/bill/119th-congress/senate-bill/394/text.

Crypto Exchanges and Custodians[8]

37. As explained in Chapter 1, crypto exchanges such as Coinbase facilitate buying/selling of crypto assets and provide custody and wallet services. In their role as custodians, they are an important data source for holdings of crypto assets of different institutional sectors. This sub-section provides guidance on the compilation of crypto assets under custody (i.e., holdings of their clients), financial flows/stocks, and income/expenses of crypto exchanges based on the publicly available financial statements of major exchanges (e.g., Coinbase).[9] Financial statements are generally available for the group as a whole covering global operations across different product lines and subsidiaries (e.g., custody, buying/selling of crypto assets, staking, lending/borrowing).

Crypto assets under custody, staking, and related revenue

38. Financial statements of crypto exchanges such as Coinbase provide relatively detailed information on assets on platform (meaning crypto assets under custody)[10] at the global level, with breakdown into the following crypto asset types: Bitcoin, Ethereum, Solana, USDC and other crypto assets. This custodial model makes Coinbase distinct from other exchanges, which provides public disclosure of holdings to ensure transparency about their scale of holdings. On the other hand, exchanges such as Robinhood operate as a multi-asset brokerage, offering stocks, ETFs, options, and a limited set of services related to crypto assets, but separate details on cryptos under custody are not provided.

39. Assets under custody were also noted as including those held for institutional clients such as exchange-traded funds, with custodial fee revenues tied directly to the volume of assets under custody. The report also provides details on crypto assets placed with the exchange for staking by institutional and retail investors.[11]

40. The report also provides revenue from custody and other services with a broad breakdown of revenue from United States and others classified as “international”. The important items of revenue in addition to custodial fee are transaction revenue, blockchain rewards (staking revenue), and stablecoin revenue. The important expenditure items for which the report provides details include blockchain rewards (staking rewards), blockchain transaction fee, and USDC rewards (these items are further explained in the model questionnaire on crypto exchanges—see Annex 3.6).

---

[8] Although these entities mostly function as crypto exchanges, custodians, and wallet providers, they are referred to as crypto exchanges in this Guide for simplicity.

[9] In contrast, prominent global crypto exchanges such as Binance, Kraken, and Gemini, which operate primarily as private entities, do not file public reports. This lack of public reporting means the revenue of specific verticals (like institutional custody), and consolidated revenue across their different countries of operation remain largely unavailable to the compilers of macroeconomic statistics.

[10] Coinbase defines assets on platform (AOP) as the total United States dollar equivalent value of USDC and crypto assets held or managed on behalf of customers in digital wallets on our platform, including custody services but excluding assets for which the customer holds full or partial keys, calculated based on the market price on the date of measurement. For simplicity, we call AOP as assets under custody in this Guide.

[11] As mentioned in chapter 2, the staking rewards received by the holders of crypto assets are treated as revenue for the provision of computer services and the crypto assets placed for staking should remain on the balance sheet of the original holder.

41. Several elements required for national accounts and external sector statistics compilation are not available. National compilers can use global data to understand the scale and growth of crypto assets and flows but cannot directly incorporate these figures into their own country's national accounts or BOP. For example, Coinbase does not report the residency of customers (i.e., holders of crypto assets), and while 83 percent of revenues from custody services are linked to U.S. clients, this cannot be directly equated with the residency of asset holders. There is also no country-level breakdown of non-U.S. activity, preventing bilateral or directional analysis of cross-border flows. In addition, there is no sectoral allocation of institutional clients (i.e., holders placing their assets under custody). Flow data are not separated into transactions and revaluations, which is a critical omission given the volatility of crypto asset prices, where changes in holdings may reflect mostly revaluations.

42. Financial statements of crypto exchanges are a useful starting point for measuring the holdings of crypto assets and other items, but they need to be supplemented by other sources and estimations for their use in national accounts and external sector statistics.

- In the short-term, compilers may apply proxies to measure residency and sectoral breakdown of holders of crypto assets. Custodial revenue provides a proxy for geographic allocation: Further, the trading volume split between institutional and retail clients could be used as a proxy for sectoral allocation of assets. It is also emphasized that the accuracy of any proxies/estimates need to be periodically reassessed. **Annex 3.5 provides** estimated holdings of different crypto assets for residents (USA)/ nonresident customers and by sectors following the above proxies at the end of 2024. For deriving transactions and revaluations from the positions data (holdings of crypto assets), compilers may refer to the numerical example in **Box 2.6.**

- In the medium-term, closer collaboration with custodians and regulators will be essential to ensure that crypto assets are properly integrated into national accounts, balance of payments, and IIP statistics in line with the BPM7/2025 SNA framework. This could be achieved through standardized survey questionnaires for collecting data from crypto exchanges on the assets under custody by residence and by institutional sector, as well as flows separated into transactions, revaluations, and other changes in volume. **See Annex 3.6 for a model survey questionnaire for collecting data from crypto exchanges.**

43. **Annex 3.7** provides mapping of key items from the financial statements of mining companies, stablecoins issuers, and crypto exchanges into *2025 SNA/BPM7* categories to help in using the financial statements in the measurement of crypto assets in national accounts and external sector statistics.

Corporate Holdings of Crypto Assets and Related Surveys

44. The growing prominence of crypto assets—particularly Bitcoin, Ethereum, and stablecoins—has led to increased corporate adoption across countries. While crypto-native firms such as mining companies and crypto exchanges dominate in terms of volume, nonfinancial and financial corporations (e.g., Tesla, MicroStrategy) have disclosed crypto holdings in their financial statements.[12] Crypto assets are frequently presented in the financial statements under the item "digital assets".

[12] As of December 31, 2024, MicroStrategy and Tesla reported digital asset holdings (primarily Bitcoins) valued at $23.9 billion and $1.076 billion, respectively (for additional details see the balance sheets details of MicroStrategy and Tesla available from SEC filings 10-k). They provide additional details like holdings in Bitcoins in units and value.

45. A number of challenges arise in using publicly available corporate financial statements as a source for compiling crypto-related statistics, which compilers should be aware of:

- Disclosure practices remain inconsistent. Many firms report crypto holdings only when they are material or strategically relevant, and even then, the formats vary considerably. For instance, MicroStrategy provides detailed quarterly updates, while firms such as NEXON and Monex Group limit disclosures to minimal references.
- Instrument classification also poses difficulties, as crypto assets are frequently reported as a single line item without distinguishing among different types, such as Bitcoin versus stablecoins. A typical example is when firms record "digital assets" without clarifying whether they represent non-produced assets or financial instruments.
- Under IFRS, digital assets are commonly valued at cost less impairment, with fair values only disclosed in the notes, while US GAAP requires fair value reporting at the end of the reporting period.[13]
- Financial statements often lack counterparties and geographic detail. This makes it difficult to assess cross-border positions in balance of payments or international investment position statistics. A U.S. firm, for example, may hold stablecoins issued by a Cayman-based entity, but this information is rarely evident in published accounts.

46. In sum, while corporate financial reports can provide useful insights into crypto holdings and activities, compilers should use their data complemented by other data sources to ensure more comprehensive coverage of crypto-related activities.

47. In addition to the data from financial reports of companies, it is also important to incorporate targeted questions on crypto assets in the enterprises surveys to capture comprehensive information on their flows/stocks, revenue, and expenditures. Most of these questions are also relevant for other institutional sectors such as households. See **Annex 3.8 (Section 1)** for the sample questions on fungible crypto assets for possible incorporation in the household and enterprise surveys.

D. ALTERNATIVE (COMMERCIAL) DATA SOURCES

48. Commercial blockchain analytics firms such as Chainalysis, Elliptic, and Glassnode offer rich datasets and insights into crypto asset transactions, holdings (positions), and user behavior. These corporations collect data from public blockchains like Bitcoin and Ethereum, and apply proprietary attribution techniques to identify wallet clusters (i.e., groups of blockchain wallets that are controlled by a single entity), categorize user types (e.g., exchanges, miners), and estimate transactions and other flows of crypto assets between entities and geographies.

49. The core data products from on-chain analytics companies include:

- Market capitalization and market prices of different crypto assets.
- On-chain transaction data, including volume, direction (inflows/outflows), and timing.

[13] Under the latest US accounting standards, US companies must now report their crypto assets, like Bitcoin, at fair value on the balance sheet and recognize all unrealized gains and losses from remeasurement directly in net income.

- Geographic estimates of crypto activity include main counterpart economies of inflows/outflows
- Entity-level, often heuristics and model-based classification (e.g., exchanges, illicit actors, DeFi protocols).
- Wallet balances, historical and current, across major blockchains.
- Market intelligence dashboards with cross-border movement estimates and risk scores.

50. While these data are valuable for understanding crypto activity, they face several important limitations for compiling crypto asset flows and stocks in the *BPM7/2025 SNA* frameworks. See Box 3.3 for the key limitations in using the commercial data for compiling data on crypto assets in macroeconomic statistics.

Box 3.3. Key Limitations of Commercial Data for Macroeconomic Statistics

Commercial datasets on crypto activity are typically based on blockchain transactions (so-called *on-chain* data), but these capture only part of the crypto ecosystem. A substantial portion of activity takes place *off-chain*—for example, through centralized crypto exchanges (CEXs) or custodial service providers—where investors may hold and transact crypto assets without directly interacting with blockchains. Consequently, on-chain data alone provide incomplete coverage of total crypto transactions, particularly in economies where CEXs are widely used.

Blockchain data record movements between addresses, not between ultimate beneficial owners. As a result, on-chain flows may include internal transfers within the same institutional unit (e.g., between an entity's hot and cold wallets), rather than transactions that involve a change in economic ownership across borders. This limits their usefulness for compiling macroeconomic statistics.

Databases derived from blockchain analysis rely on assumptions and approximations, which may not always meet the methodological requirements of *BPM7/2025 SNA*. In particular, approximating the residency of institutional units involved in crypto transactions remains challenging. Three main approaches have been used to infer residency:

- Geographical location of the crypto exchange registration (after matching the blockchain addresses with exchanges), instead of looking for proxy of holders' residency;
- The location of web visitors to the crypto exchange website and the geographic distribution of app usage of the respective crypto exchanges; and
- Entry and exit fiat currency as a proxy of residency of units engaged in transactions in crypto assets.

Developing on-chain analytics also requires specialized IT and machine-learning capabilities. National statistical offices and central banks may build such capacity in-house or rely on commercial providers. Both approaches entail additional costs, and commercial methodologies are often only partially disclosed, making it difficult to assess their consistency with international statistical standards.

51. Nevertheless, commercial data could be useful to track macroeconomic trends that may be attributed to crypto flows. For example, large increases in errors and omissions (statistical discrepancy) in

the balance of payments in economies that are ranked high in crypto adoption may be attributed to unrecorded cross-border crypto transactions as highlighted in the 2025 IMF's Article IV Report of Vietnam (Report). Based on the data from Chainalysis,[14] the Report noted that the large increase in Vietnam's statistical discrepancy in the BOP may be partly related to the rise in unrecorded crypto transactions, with statistical discrepancy increasing from less than US$10 billion before 2022 to averaging US$28 billion during 2022–24.[15]

E. DATA SOURCES ON NFTs

52. This section outlines potential data sources for compiling NFT flows and stocks in national accounts and external sector statistics.

53. **Tax data and financial reports:** Tax data can be a valuable source for estimating NFT flows and holdings by residents because holders are required to report the related holding gains. For example, in the United States, tax filings capture realized gains and losses from NFT sales, allowing compilers to estimate the total value of NFT transactions conducted by residents over a given period. While tax forms primarily capture realized transactions, the reporting of holdings (e.g., for capital gains purposes) provide partial information on resident ownership of NFTs, especially when combined with survey data. Further, unlike mining companies or stablecoin issuers, the financial reports of large NFT creators—such as Yuga Labs, the creator of the Bored Ape Yacht Club—are not publicly available, making them difficult to use as a source. While the total value of NFTs sold in a given year can be observed through marketplaces or blockchain data, the buyers are largely anonymous, and information on intermediate costs or operational expenditures is unavailable. Although crypto exchanges such as Coinbase reports "assets on platform" for fungible crypto assets such as Bitcoin, Ethereum, and stablecoins like USDC, NFTs are generally excluded or aggregated without differentiation.

54. **Data from crypto exchanges and custodians:** Crypto exchanges such as Coinbase represent an important potential source of data on NFT holdings, particularly for estimating stocks by resident sectors. These entities offer institutional and retail clients secure custody of NFTs and often maintain detailed internal records of each customer's holdings, including the residency and other KYC details. If accessible, such data could allow statistical agencies to estimate the total stock of NFTs held by different institutional sectors, See **Section 6, Annex 3.6** for the sample questions on NFTs for collecting the related flows and stocks from crypto exchanges.

55. **Surveys of creators[16] and potential holders:** Targeted surveys of companies creating NFTs can capture the output, intermediate consumption, and export share of created NFTs. Further, adding questions on NFTs to the existing surveys of households and enterprises can help in capturing the data

[14] At the time of drafting the chapter, Chainalysis covers about 90% of daily market volume across 120 digital assets including seven coins: Bitcoin (BTC), Bitcoin Cash (BCH), Ethereum (ETH), Litecoin (LTC), Tether (USDT), TrueUSD (TUSD), USD Coin (USDC). Chainakysis monitors transactions of 800 exchanges to capture crypto activity of thousands of businesses, fund flows on the blockchain linking it to real-world entities.

[15] For additional details, refer to the IMF Article IV Report (Annex VII: Crypto Assets in Vietnam).

[16] NFT creators are economic units—typically individuals, digital artists, gaming studios, or specialized firms—that produce original digital content and "mint" it on a blockchain as unique, non-fungible tokens. They generally belong to the household or nonfinancial corporations sectors and generate income by selling NFTs or earning royalties from secondary sales.

on flows/stocks of those sectors. **See Annex 3.9 for a model survey questionnaire for collecting data from NFT creators. Further, Annex 3.8 (Section 2)** for the sample questions on NFTs for possible incorporation in the household and enterprise surveys.

56. Blockchain and marketplace data: All NFT transactions and holdings are recorded publicly on blockchains, offering near-complete visibility of market activity. For example, collections such as *CryptoPunks* have fully traceable transaction histories, including details on token transfers, prices, and wallet addresses including all the owners of CryptoPunks. Blockchain and marketplace data—accessible through analytics firms like Chainalysis or platforms such as OpenSea—provide extensive information on transaction volumes and timestamps. While these datasets allow compilers to observe total market turnover and broad transaction patterns, tracing blockchain wallet addresses to specific countries or institutional units remains nearly impossible. Consequently, despite their transparency, blockchain records alone are not sufficient for compiling NFT-related flows and stocks consistent with national accounts and external sector statistics frameworks.

57. All in all, while the above data sources provide a useful starting point, comprehensive data categorized by the three types of NFTs, as envisaged in *BPM7* and the *2025 SNA*, may be achievable in the medium term, with continued coordination among relevant stakeholders including the creators, statistical agencies, regulators, tax authorities, and custodians.

F. DGI-3 RECOMMENDATION 11 DATA COLLECTION TEMPLATES: DATA SOURCES

58. Recommendation 11 establishes a data collection framework covering central bank digital currencies (CBDCs), stablecoins, and other types of crypto assets used as a means of payments. The task team on Recommendation 11 (Rec. 11 TT) agreed on the following data collection templates, which can be accessed on the G20 DGI Recommendations website.[17]

- Template for Central Bank Digital Currency (CBDC): Data on issuance of CBDCs by central banks and monetary authorities and the holdings of the CBDCs.
- Template for Stablecoins Issuers: Data on issuance of stablecoins by resident entities and the holdings of stablecoins.
- Template for Holdings and Flows of Crypto Assets: Data on crypto assets and stablecoins held by the customers of resident crypto exchanges and custodians.

59. This sub-section assesses the data sources and compilation methods relevant for **core data in the templates** (marked in orange) on stablecoin issuers and holdings and flows of crypto assets, considering their relationship to the *BPM7/2025 SNA* crypto assets framework.

Template for Stablecoin Issuers

60. The template aims to capture stablecoins issuance by resident entities and their holders. For resident holders, data are required by following institutional sectors: households, central bank, deposit-taking corporations, other financial corporations, money market funds, general government, nonfinancial corporations (NFCs) with further split into private and public NFCs.

[17] Rec 11. TT launched test data collection using these templates from all G20 and FSB participating economies during July 15 to November 15, 2025.

61. As the template focuses on reporting of liabilities on account of stablecoins issued, compilers should use the guidance in Section C.2 for compiling these data from the financial reports of stablecoin issuers. However, as mentioned in section C.2, the residence of stablecoin holders is unknown from the financial reports. The residency of holders of stablecoins may be approximated using mirror data from major exchanges and custodians or, as in the case of Tether now headquartered in El Salvador, by assuming that the overwhelming share of liabilities is held abroad. For example, Coinbase financial report provides the holdings of different stablecoins (e.g., USDC, Tether) by US residents on its platform. Financial reports of corporations and regulatory data can also provide further insights on stablecoin holdings of resident sectors of the compiling economy.

62. In the medium term, **model survey questionnaire for collecting data from stablecoin issuers (Annex 3.4)** will be helpful in collecting the information required for reporting the template.

Template for Holdings and Flows of Crypto Assets

63. This template aims to capture data from crypto exchanges and custodians on crypto assets held by customers. The template is structured in two parts: a) Data by broad categories of crypto assets; and b) Data on crypto-by-crypto.[18]

64. The template on data by broad categories of crypto assets requires reporting of flows and positions (opening position, inflows/outflows, other changes, and closing position) of crypto assets (total, and breakdown into stablecoins and unbacked crypto assets[19]) that are under the custody of resident custodians and belong to resident and nonresident holders. For resident holders, data are required by institutional sectors as in the case of stablecoin issuers mentioned above.

65. The template on crypto-by-crypto requires reporting of holdings in seven crypto assets (Bitcoins, Ether, Tether, BNB, SOL, USDC, and XRP) that are under the custody of resident custodians and belong to resident and nonresident holders.

66. As the templates focus on holdings and flows of crypto assets based on data collection from custodians, compilers should use the guidance in section C.3 for compiling these data from the financial reports of crypto exchanges and custodians, in the short-term. For example, Coinbase financial report provides data on assets under custody (i.e., holdings of customers) with breakdown by major crypto asset types (e.g., Bitcoin, Ether, Solana, USDC, and other crypto assets). This section (and Annex 3.5) further explains the procedure for compiling holdings of different crypto assets by (a) resident and nonresident customers; and (b) resident institutional sectors. Given that data on flows are not available from financial reports, those data should be estimated based on Annex 3.3. This should also take into consideration the data on crypto assets loss, theft, and seizures, if relevant for the compiling economy.

[18] These templates translate into reporting data on crypto assets—(i) crypto assets without a corresponding liability designed to function as a medium of exchange (AN22), and (ii) crypto assets with a corresponding liability designed to serve as a general medium of exchange but not issued or authorized by monetary authorities or government (AF22)—by SNA institutional sectors. The key distinction is that while the templates focus on crypto holdings/flows of resident institutional sectors with resident custodians, the institutional sector accounts encompass holdings/flows of resident sectors with both resident and nonresident custodians.

[19] Crypto assets without a corresponding liability designed to function as a medium of exchange.

67. In addition to the financial reports of custodians, financial reports of crypto mining companies and financial reports of corporations (e.g., MicroStrategy and Tesla in the case of USA), regulatory data, and tax data (mainly flows) are good sources for collecting the data on holdings of resident institutional sectors, as explained in Section C.3. With regards to cross-border inflows and outflows, ITRS could be an important source for those economies where it is operational (e.g., Brazil).

68. To achieve comprehensive reporting of these templates (especially with regards to positions) in the medium-term, compilers should collect data from custodians— domestically headquartered exchanges and local branches or subsidiaries of foreign-owned platforms—using the standardized survey questionnaire (see Annex 3.6). This questionnaire is designed to meet the specific requirements of the templates but may be modified further to accommodate the needs of the compiling economy.

G. DATA SHARING ON CRYPTO ASSETS ACROSS ECONOMIES

69. Based on the discussion in the previous sections it is evident that compiling accurate statistics on crypto assets positions and flows requires recognizing the highly international and cross-border nature of the crypto ecosystem. Relying solely on national data sources—such as administrative records or surveys of CASPs and households—may be insufficient, as residents often transact with or hold assets through service providers abroad. For example, a household survey in Country A may understate holdings if many of them don't report their holdings with nonresident exchanges and custodians, while tax filings may not capture crypto assets kept in custodial wallets outside the country.

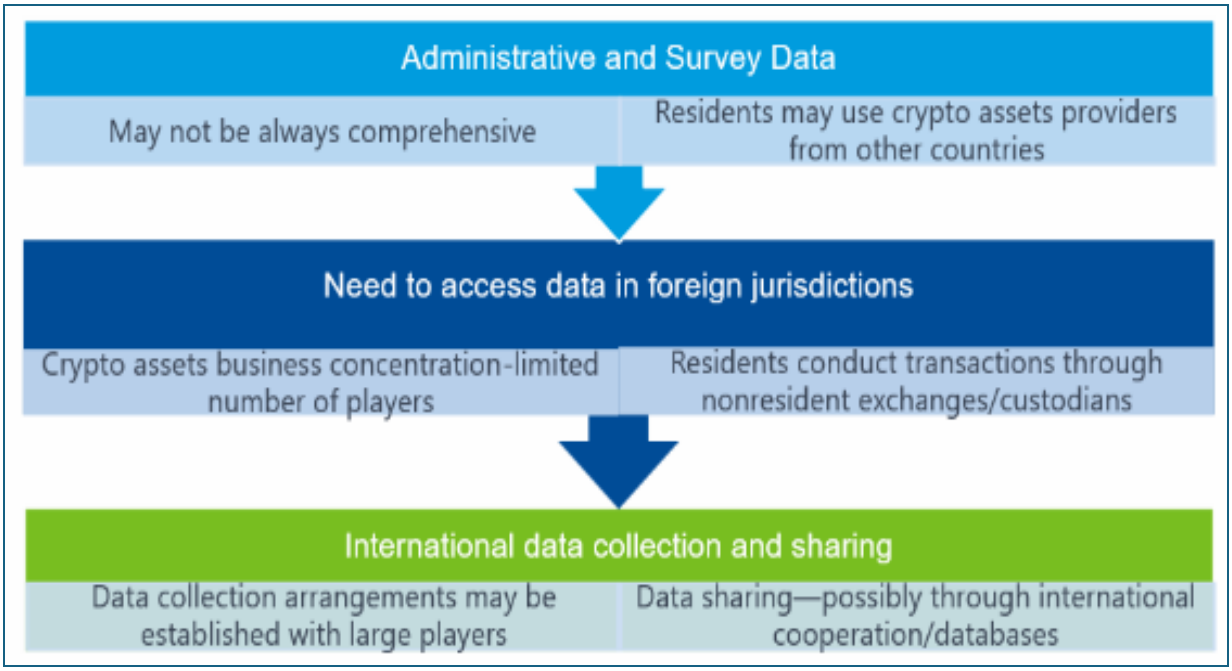
70. A major challenge lies in the fact that crypto asset activity is concentrated among a small number of global players, such as large exchanges, major stablecoin issuers, and custodians. These entities typically operate from a few economies but provide services globally. Residents in Kenya, Brazil, or Indonesia, for instance, may hold assets on an exchange headquartered in the United States, such as Coinbase. Similarly, residents in Germany may use a stablecoin issued in Hong Kong or Singapore for cross-border payments. Without access to information from these foreign providers, national compilers may underestimate residents' holdings, cross-border flows, and related income.

71. As explained in Chapter 1, unlike traditional financial instruments, crypto assets introduce new features—such as decentralized issuance, pseudonymity, and digital custody—that complicate measurement. These characteristics mean that conventional data sources and collection mechanisms cannot fully capture the scope of activities.

72. Effective data collection arrangements can be developed with major actors in the crypto ecosystem—stablecoin issuers, large exchanges, and mining companies. International organizations are well positioned to facilitate and coordinate such cooperation by creating frameworks for standardized reporting and enabling the exchange of data on positions, holders, and residency. Such an approach should acknowledge legal constraints but still promote workable arrangements that strengthen global statistical coverage and the quality of macroeconomic statistics. **Figure 3.1** illustrates the above discussion.

73. Further, internationally coordinated databases or data-sharing agreements, like the models used in the Coordinated Portfolio Investment Survey (CPIS) or Coordinated Direct Investment Survey (CDIS), could provide countries with reliable information on crypto asset holdings and flows relevant to their residents, even when the service providers are abroad.

Figure 3.1. Need for International Data Sharing on Crypto Assets



Annex 3.1. Selected Seizures of Crypto Assets

Country	Asset Type	Value	Context
USA	Bitcoin	$3.6 billion	Bitfinex Hack (2022). Department of Justice seized funds laundered from 2016 Bitfinex hack
USA	Bitcoin	$3.36 billion	Silk Road (2021). Seizure of Bitcoin stolen from Silk Road darknet marketplace
Crypto Investment Scams (2025)	Cryptocurrency	$225.3 million	Largest seizure in U.S. Secret Service history; linked to fraud and laundering
United Kingdom	Bitcoin	$3 billion	Money laundering operation
Germany	Bitcoin	$2.17 billion + $38 million	Piracy website and laundering after Bybit hack
Australia	Bitcoin	$2.6 million	Stolen from French crypto exchange
Spain	Cryptocurrency	EUR 27 million	Transnational criminal organization
Israel	Cryptocurrency	$1.7 million	Linked to Hezbollah and Iran's Quds Force
Albania	Crypto assets	$10 million	Organized crime group
Serbia	Crypto wallets	$1 million	Fake crypto investment schemes
Netherlands	Cryptocurrency	$7.6 million	Illicit exchanges shut down

Annex 3.2. Model Survey Questionnaire of Crypto Mining Companies

[to be updated prior to global consultation on the lines of the questionnaires on stablecoin issuers and crypto exchanges—as mining companies operate as subsidiaries in several countries]

This survey questionnaire provides a template for collecting data from crypto mining companies to help in estimating their output, value added, and financial flows/stocks in line with the *BPM7* and *2025 SNA*. As explained in **Chapter 2,** the services of miners should be measured as the sum of both explicit validation fees and implicit fees (newly released crypto assets)—see **Box 2.2 for additional details.**

General Guidance

- Report all values in USD unless otherwise specified.
- Use the price on the day of the transaction when reporting the value of Bitcoins mined or received.
- If a question does not apply to your company, please indicate "Not Applicable (N/A)".
- If exact figures are not available, provide your best estimates and indicate that they are estimates.
- Ensure consistency across reported figures (e.g., mined Bitcoins should match usage and holdings.

Section 1: General Information

1.1 Legal name of the reporting entity

1.2 Country of incorporation and registration

1.3 Contact person (name, title, email, phone)

1.4 Reporting period (start and end dates)

Section 2. Details on mining, financial flows/stocks, and use of crypto assets		
Item		**Year t**
1. Number of Bitcoins mined during the period	Units	
2. Value of Bitcoins mined or implicit fee (at price of the day of the transaction)	USD	
3. Explicit Fee received for validating the transactions (in Bitcoins) Value of Bitcoin received in explicit fee	Units USD	
4. Input costs related to mining/validation services	USD	
a) Electricity expense/consumed Electricity in units	USD MWH	
b) Maintenance of equipment and other services (e.g., IT and related) of which non-resident service fees	USD USD	
c) Remuneration of employees of which non-resident Remuneration of employees	USD USD	
d) Other input costs	USD	

5.Selected Balance Sheet Items for Bitcoin Mining		
Assets		
a) Currency and deposits	USD	
b) Gross Capital Formation for Bitcoin Mining	USD	
c) Intellectual property products	USD	
d) Bitcoin	USD	
Liabilities incurred to Finance Bitcoin Mining		
a) Loans and Advances	USD	
b) Debt securities	USD	
c) other liabilities (specify)	USD	
6. Revaluations and other changes in volume of Bitcoin Assets		
a). Revaluation of Bitcoin assets	USD	
b) Other changes in volume (e.g., theft, loss, seizures) of Bitcoin assets	USD	
7. Use of Bitcoins		
a) sold to resident exchanges		
§ Number (could be a fraction)	Units	
§ Value	USD	
b) sold to nonresident exchanges		
§ Number	Units	
§ Value	USD	
c) transferred to head office/others		
§ Number	Units	
§ Value	USD	
d) Payments for purchase of goods and services		
§ Number	Units	
§ Value	USD	
e) Other uses	USD	

Annex 3.3. Deriving Transactions and Price Changes from Positions Data

For deriving transactions from positions, the following indicative steps can be undertaken to compile the integrated IIP statement for El Salvador, where the headquarters of Tether is located. The calculations are based on the dynamics of U.S. treasury bills and the corporate bonds index. Compilers can use different methods and assumptions if they can result in better outcomes. The general assumption is that all investments are made outside of El Salvador. Compilers in the countries where the stablecoin issuers are located are advised to collect data on holdings of domestic assets to adjust the calculation models.

Tether publishes positions data in transparency reports. In addition, it provides very detailed information about valuation prices of different assets (precious metals, Bitcoins).

Table 1. Tether: Composition of Assets

Asset Category	Amount (USD)	
	As of Dec 31, 2024	As of March 31, 2025
1. Cash & Cash Equivalent & Other Short-Term Deposits:	118,335,279,417	121,647,076,498
- U.S. Treasury Bills	94,471,651,607	98,523,657,338
- Overnight Reverse Repurchase Agreements	14,101,623,321	15,093,981,718
- Term Reverse Repurchase Agreements	3,077,452,467	1,613,610,695
- Money Market Funds	6,506,444,067	6,285,638,008
- Cash & Bank Deposits	108,844,601	64,302,555
- Non-U.S. Treasury Bills	69,263,354	65,886,184
2. Corporate Bonds	14,270,773	14,354,777
3. Precious Metals	5,318,875,241	6,663,205,657
4. Bitcoin	7,857,529,277	7,662,210,442
5. Other Investments	3,984,793,433	4,462,144,209
6. Secured Loans	8,194,007,406	8,825,524,405
Total (1+2+3+4+5+6)	**143,704,755,547**	**149,274,515,988**

Source: I*ndependent auditors' report on the financials figures and reserves of Tether International, S.A. DE C.V.*

The price of the US treasury bills increased by 3 percent during the quarter; the index would be 103 for end-March against 100 at the end of December 2025. Applying the adjusted value for the end-March data, the transactions are estimated at USD 1,200 million. The following table shows the transaction volume to be recorded in the BOP for each item of the financial statements. Compilers may include estimates of non – USD currencies for adjustments.

Table 2. Calculation of Components Needed for Compilation of the Integrated IIP of El Salvador

Asset Category	Opening positions as of Dec 31, 2024 (as reported)	Transactions (derived)	Price changes (derived, residual)	Closing positions as of March 31, 2025 (as reported)
1. Cash & Cash Equivalent & Other Short-Term Deposits:	118,335	1,377	1,934	121,647
- U.S. Treasury Bills	94,472	1,200	2,852	98,524
- Overnight Reverse Repurchase Agreements	14,102	992	-	15,094
- Term Reverse Repurchase Agreements	3,077	(1,464)	-	1,614
- Money Market Funds	6,506	(410)	189	6,286
- Cash & Bank Deposits	109	(45)	-	64
- Non-U.S. Treasury Bills	69	(5)	2	66
2. Corporate Bonds	14	(0)	0	14
5. Other Investments	3,985	477	-	4,462
6. Secured Loans	8,194	632	-	8,826

A similar calculation needs to be done for Bitcoins. The price of Bitcoins (the financial reports indicate the price used to value Bitcoin holdings) decreased from $93,812 at end-December 2024 to $82,704 at the end of March 2025; the average price would be $88,258.

In bitcoins, the holdings increased from 83,758 BTC (calculated as USD 7,856 million ÷ $93,812 per BTC) to 92,646 BTC (calculated as USD 7,662 million ÷ $82,704 per BTC), meaning that Tether increased its investment in BTC by:

92,646−83,758=8,888 BTC

Multiplying this increase in BTC units by the average price:

8,888×88,258≈784 million USD

This amount represents the purchase of Bitcoins, while the positions will be reflected in the nonfinancial balance sheet in national accounts (and not reflected in the IIP).

Annex 3.4. Model Survey Questionnaire of Stablecoin Issuers

This survey questionnaire helps in collecting data from the resident stablecoin issuers[20] to support the compilation of items related to them following the *BPM7* and *2025 SNA* frameworks.

Section 1: General Information

1.2 Legal name of the reporting entity

1.2 Country of incorporation and registration

1.3 Contact person (name, title, email, phone)

1.4 Reporting period (start and end dates)

1.5 Does this enterprise have a nonresident owner? Yes/No.

1.6 If the answer is Yes, does the nonresident owner hold 10 percent or more equity? Yes/No

If the answer is Yes, provide further details in Section 2 (as the Stablecoin issuer is a direct investment enterprise)

Section 2: Shareholding Structure of the Enterprise (Equity liabilities of the Stablecoin Issuer)[21]

Name and country of residence of shareholder (please also report total value for residents)	Opening position (end of year t-1 in $) /Percentage of total	Financial transactions during year t		Other changes during year t	Closing position (end of year t in $) /Percentage of total
		Acquisitions	Disposals		
1.					
2.					
3.					
Total					

[20] Domestically headquartered issuers or subsidiaries of foreign-owned companies.

[21] Given the focus on crypto assets, we haven't added a block on DI assets in the questionnaire. However, compilers may update this questionnaire to capture DI assets (based on the model survey form 18 from the *BPM6 Compilation Guide*).

Section 3: Assets/Liabilities and related transactions and other changes (USD)

Section / Item	Opening position (as at the end of Year t-1)	Changes during Year t			Closing position (as at the end of Year t)
		Net Financial Transactions (acquisitions minus disposals)	Revaluations	Other changes in volume	
3A. Liabilities – mainly relates to the issuance of stablecoins					
3.1 Total value of stablecoins issued (by currency)					
3.2 Total value of stablecoins (outstanding)					
3.3 Breakdown of stablecoin holders by residency (domestic vs. non-resident)—provide the estimated breakup (e.g., 80 and 20 percent)					
3B. Other liabilities (specify by instrument)					
3B. Assets of the Stablecoin Issuer (reserves backing the fiat denominated stablecoins) (USD) Breakdowns by domestic/external assets should be provided. For each financial asset, report the claims on nonresidents as an “of which” item (similar to currency and deposits) and identify the relevant functional category.					
Financial assets					
3.4 Currency and deposits					
Of which claims on nonresidents					
3.4.1 Stablecoins					

Of which claims on nonresidents					
3.5 Debt securities (e.g., US Treasuries)					
3.6 Loans					
3.7 Equity					
3.8 Money Market Funds					
3.9 Reverse repurchase agreements (reverse Repos)*					
3.10 Repurchase agreements (Repos)**					
3.11 Other financial assets (please specify)					
Nonfinancial assets					
3.12 Crypto assets without a corresponding liability (e.g., Bitcoins)***					
3.13 Gold (and other precious metals)					

* Stablecoin issuer acting as a purchaser of securities. ** Stablecoin issuer acting as a seller of securities. These two items are separately shown in the Genius Act as part of the backing assets; reverse repurchase agreements are also shown as part of Tether backing assets. The compiler should classify these items as loans or deposits.

*** Included as Bitcoins and other crypto assets without a corresponding liability are part of the assets of some stablecoin issuers.

Section 4: Revenues and Expenditures (Year t) (USD)

For each item, report the revenue/expenditure from/to nonresidents as an “of which” item (similar to interest income from assets). Identify the relevant functional category for earned income items..

Revenues	
4.1 Interest	
Of which from nonresidents	
4.2 Dividends	
4.3 Other revenue – fees and commissions	

4.4 Staking rewards	
4.5 Other items (specify)	
Expenditures	
4.6 Operating expenses (e.g., rental, legal, IT)	
4.7 Remuneration of employees	
4.8 Payments for services to crypto exchanges and other institutions	
4.8 Distributed dividends	
4.10 Other items (specify)	

Section 5: Additional Information	

General Guidelines

- Report all monetary values in USD.
- Use end-of-period market values for positions and transaction values for flows.
- If exact figures are unavailable, provide best estimates and indicate that they are estimated.
- Clearly distinguish between resident and nonresident counterparties.
- Ensure consistency between assets and liability positions and flows.
- If data are estimated, indicate the method used.

Annex 3.5. Estimated Crypto Holdings: USA/non-USA Residents and Resident Institutional Sectors (December 31, 2024)

Estimated Crypto Holdings by USA and non-USA residents (with Coinbase)[22]

Crypto Asset Type	Assets under custody ($bn)	US Residents (83%) ($bn)	Non-US (17%) ($bn)
Bitcoin	235.4	195.4	40.0
Ethereum	54.2	45.0	9.2
Solana	21.3	17.7	3.6
Other	87.1	72.3	14.8
USDC	6.1	5.1	1.0
Total	**404.0**	**335.3**	**68.7**

Estimated Crypto Holdings by Resident Institutional Sectors (with Coinbase)[23]

Asset Type	Total AUC ($bn)	Financial corporations (80%)	Households (20%)
Bitcoin	195.4	156.3	39.1
Ethereum	45.0	36	9
Solana	17.7	14.1	3.5
Other Crypto	72.3	57.8	14.5
USDC	5.1	4.1	1
Total	**335.3**	268.4	67.1

Note: These are illustrative calculations and subject to limitations.

[22] Custodial revenue provides a proxy for geographic allocation: 83 percent of assets under custody are attributed to U.S. residents and 17 percent to nonresidents.

[23] The trading volume split between institutional and retail clients could be used as a proxy for sectoral allocation of assets. With institutional clients accounting for about 81 percent of trading volume, 80 percent of assets could be mapped to financial corporations and 20 percent to households. The report describes institutional clients as businesses that include market makers, asset managers, hedge funds, banks, wealth platforms, registered investment advisors, payment platforms, etc. A small share of institutional holdings may belong to non-financial corporations, but in the absence of more detail, the bulk would be assigned to the financial sector.

Annex 3.6. Model Survey Questionnaire for Crypto Exchanges[24]

This survey questionnaire helps in collecting data from the resident crypto exchanges/custodians[25] to support the compilation of items related to them (including the crypto holdings of their customers) following the *BPM7* and *2025 SNA* frameworks.

Section 1: General Information

1.3 Legal name of the reporting entity 1.2 Country of incorporation and registration 1.3 Contact person (name, title, email, phone) 1.4 Reporting period (start and end dates) 1.5 Does this enterprise have a nonresident owner? Yes/No. 1.6 If the answer is Yes, does the nonresident owner hold 10 percent or more equity? Yes/No If the answer is Yes, provide further details in Section 2 (as the Stablecoin issuer is a direct investment enterprise)

Section 2: Shareholding Structure of the Enterprise (Equity liabilities of the crypto exchange)

Name and country of residence of shareholder	Opening position (end of year t-1 in $) /Percentage of total	Financial transactions during year t		Other changes during year t	Closing position (end of year t in $) /Percentage of total
		Acquisitions	Disposals		
1.					
2.					
3.					
Total					

[24] Although these entities function as crypto exchanges, custodians, and wallet providers, they are referred to as crypto exchanges in this Guide.

[25] Domestically headquartered exchanges and local branches or subsidiaries of foreign-owned exchanges.

Section 3: Assets/Liabilities and related transactions and other changes (USD)

Section / Item	Opening position (as at the end of Year t-1)	Changes during Year t			Closing position (as at the end of Year t)
		Net Financial Transactions (acquisitions minus disposals)	Revaluations	Other changes in volume	
3A. Assets of the Exchanges (USD) For each financial asset, report the claims on nonresidents as an "of which" item (similar to currency and deposits) and identify the relevant functional category.					
Financial assets					
3.4 Currency and deposits					
Of which claims on nonresidents					
3.4.1 Stablecoins[1]					
3.4.2 Customer custodial funds[2]					
3.5 Accounts receivable					
3.6 Other financial assets (please specify)					
Nonfinancial assets					
3.6 Crypto assets without a corresponding liability (e.g., Bitcoins)[3]					
3B. Liabilities of the Exchanges (USD) For each liability item, report payable to nonresidents as an "of which" item (similar to currency and deposits) and identify the relevant functional category.					
3.7 Currency and deposits					
Of which payable to nonresidents					
3.7.1 Customer custodial fund liabilities[4]					

3.8 Accounts payable					
3.9 Other liabilities (please specify)					

Section 4: Revenues and Expenditures (Year t) (USD) For each item, report the revenue/expenditure from/to nonresidents as an "of which" item (similar to transaction revenue). Identify the relevant functional category for earned income categories.	
Revenues	
4.1 Transaction revenue[5]	
Of which from nonresidents	
4.2 Blockchain rewards (staking revenue)	
4.3 Custodial fee	
4.4 Stablecoin revenue[6]	
4.5 Other subscription and services revenue	
4.6 Interest	
4.6.1 Interest from crypto lending	
4.7 Dividends	
4.8 Other items (specify)	
Expenditures	
4.9 Blockchain rewards (staking rewards)[7]	
4.10 Blockchain transaction fee[8]	
4.11 USDC reward[9]	
4.12 Other expenses (e.g., rental, legal, IT,	

marketing, payment processing)	
4.13 Remuneration of employees	
4.14 Interest	
4.14.1 Interest on crypto borrowing	
4.8 Distributed dividends	
4.10 Other items (specify)	

Notes:

1 Stablecoins may be reported by type, if relevant. For example, Coinbase provides the holdings of USDC separately.

2 Customer custodial funds represent restricted cash and cash equivalents maintained in segregated accounts of the Company at financial institutions and asset managers that are held for the exclusive benefit of customers and deposits in transit from payment processors and financial institutions.

3 Included as Bitcoins and other crypto assets without a corresponding liability are generally part of the assets of exchanges.

4 Customer custodial fund liabilities represent the obligation to return cash deposits held by customers in their fiat wallets and unsettled fiat deposits and withdrawals.

5 Transaction revenue is the fee/commission earned for facilitating a buy, sell, or convert transaction for a customer. Both the explicit fee and the profit from that spread are generally included in the transaction revenue. Transaction revenue is generally available by crypto assets.

6 Stablecoin revenue is specifically relevant for Coinbase. It refers to Coinbase's share of income derived from its partnership with Circle for the promotion and distribution of the USDC stablecoin

7 Represents the amount of staking rewards distributed to customers who have staked their crypto assets through exchanges.

8 Blockchain transaction fees are network fees paid to miners or validators when Coinbase (on behalf of its users) sends transactions on a blockchain.

9 This expense is specific to Coinbase and represents the portion of stablecoin revenue paid out to users.

Section 5: Assets under custody-fungible crypto assets (USD)

For each type of crypto asset, report the assets that belong to nonresidents (similar to Bitcoins) kept in the custody of exchange/custodian surveyed. Further, for the assets belong to residents, provide the breakdown by institutional sectors.

5.1 Bitcoins					

Of which belong to nonresidents					
5.2 Ethereum					
5.3 Tether					
5.4 BNB					
5.5 SOL					
5.6 USDC					
5.7 XRP					
5.8 Other stablecoins					
Total 1 (Crypto assets without a corresponding liability): 5.1+5.2					
Of which belong to nonresidents					
Total 2 (Crypto assets without a corresponding liability): 5.3+…+5.8					
Of which belong to nonresidents					
Total (Total 1 +Total 2)					
Of which belong to nonresidents					
Section 6: Assets under custody-NFTs (USD) For each type of NFT, report the assets that belong to nonresidents (similar to crypto punks) kept in custody of exchange/custodian surveyed. Further, for the assets belong to residents, provide the breakdown by institutional sectors. Top 5 NFT collections by market cap are included.					
6.1 Crypto Punks					
Of which belong to nonresidents					
6.2 Bored Ape Yacht Club					
6.3 Mutant Ape Yacht Club					

6.4 Pudgy Penguins					
6.5 Autoglyphs					
Total: 61+…+6.5					
Of which belong to nonresidents					

Section 6: Additional Information	

General Guidelines

- Report all monetary values in USD.
- Use end-of-period market values for positions and transaction values for flows.
- If exact figures are unavailable, provide best estimates and indicate that they are estimated.
- Clearly distinguish between resident and nonresident counterparties.
- Ensure consistency between assets and liability positions and flows.
- If data are estimated, indicate the method used.

Annex 3.7. Key Financial Statement Items Related to Crypto Assets:

Mapping to *BPM7/2025 SNA* Classification

Sl. No.	Financial statement item	*BPM7* classification	*2025 SNA* classification
1.	Bitcoin received as mining reward (implicit fee)	Current account → Services → Computer services (credit) + Capital account → Acquisition of nonproduced nonfinancial assets (debit)	Production account (output of mining); Capital account (acquisition less disposals of non-produced nonfinancial assets: crypto w/o corresponding liability)
2.	Bitcoin received as transaction fees (explicit fee, including from staking)	Services (credit) + Capital account → Acquisition of non-produced assets (debit)	As in #1
3.	Bitcoin receipts from hardware/software sales	Goods/Services (credit) + Capital account → Disposal of non-produced assets (debit)	Goods/Services output + Capital account (acquisition less disposal)
4.	Bitcoins realized for cash (sold for fiat)	Capital account → Disposal of non-produced assets (credit) + Financial account → Other investment → Currency & deposits (NAFA ↑)	Capital account (acquisition less disposal) + Financial account (cash ↑)
5.	Bitcoins used to pay nonresident consultants/for any other services	Services (debit) + Capital account → Disposal of nonproduced assets (credit)	Intermediate consumption/imports of services + Capital account (acquisition less disposal)
6.	Bitcoins used to pay compensation to nonresident staff	Earned income → Compensation of employees (debit) + Capital account → Disposal of nonproduced assets (credit)	Earned income account (compensation) + Capital account (disposal)
7.	Interest on Bitcoin-denominated loans paid in Bitcoins	Earned income → Investment income → Interest (debit) + Capital account → Disposal of nonproduced assets (credit)	Earned income account + Capital account (disposal)
8.	Dividends paid in Bitcoins to nonresident owners	Earned income → Direct investment income → Distributed income of corporations (debit) + Capital account → Disposal of nonproduced assets (credit)	Earned income of corporations/property income/dividends + Capital account (acquisition less disposal)

9.	Bitcoins/Ethereum (or other crypto assets without corresponding liability) loans/borrowings received	No IIP liability and no recording in financial accounts (similar to security lending); Earned income → interest (debit) for periodic fees payable + Capital account → Disposal of nonproduced assets (credit)	Earned income account/Property income → interest
10.	Bitcoin/Ethereum (or other crypto assets without corresponding liability) loans/borrowings granted	No IIP liability and no recording in financial accounts (similar to security lending); Earned income → interest (credit) for periodic fees receivable + Capital account → Disposal of nonproduced assets (debit)	Earned income account/Property income → interest
11.	Bitcoin loans received from direct investors/provided to subsidiaries	As in #10, no financial positions; Earned income → Direct investments (credit or debit)	Earned income account/Property income → interest
12.	Loans denominated in USD but received in Bitcoins	Other investment → Loans, NIL↑ + Capital account → Disposal of nonproduced assets (debit);	Financial account → Other accounts; Capital account for BTC movements
13.	Bitcoin accounts in crypto exchange (i.e. Coinbase)	No position in IIP; the initial owner remains the economic owner.	No financial instrument is recorded.
14.	Bitcoin payables/receivables for cross-border trade settled in Bitcoins	Other investment → Other accounts payable/receivable – Trade credits; settlement via Capital account (disposal/acquisition of Bitcoins)	Financial account → Other accounts; Capital account for BTC settlement
15.	Loans in stablecoins to be settled in stablecoins	Other investment → Loans (transactions); settlement via Other investment → Currency and deposits	Financial account → Loans; Settlement Financial account → Loans + Financial account (Currency and Deposits ↑)

Annex 3.8. Questions on Fungible Crypto Assets and NFTs for Enterprise and Household Surveys

SECTION 1. Fungible crypto assets (Flows/stocks, revenue, and expenditure)

1. Opening stock of crypto assets by type (units and value in USD)
   Stablecoins (AF22)
   crypto assets without a corresponding liability designed to function as a medium of exchange (AN22)
2. Crypto assets purchased during year t (type, units and value in USD)

   Of which purchased from nonresident exchanges (USD)
3. Closing Stocks of crypto assets by type (at the end of Year t in USD)
4. Crypto assets lost due to theft/hacking/seizures (type, units and value in USD)
5. Revenue from lending of crypto assets (USD)

   Of which from nonresidents
6. Revenue from staking crypto assets (USD)

   Of which from nonresident exchanges
7. Income from mining (for households)—provide number and value of crypto assets mined plus transaction fee received (USD)

   Of which sold to nonresident exchanges (USD)
8. Expenditure related to mining—electricity and other expenditures (USD)

   Of which paid to nonresidents
9. Expenditure on borrowing of crypto assets—interest payment (USD)

   Of which paid to nonresidents
10. Additional information

SECTION 2. NFTs (Flows and Stocks)

1. Opening Stocks of NFTs by type (at the beginning of Year t in USD)
2. NFTs purchased during year t (type, units and value in USD)

   Of which purchased from nonresident marketplaces/creators (USD)
3. Closing Stocks of NFTs by type (at the end of Year t in USD)

Annex 3.9. Model Survey Questionnaires for NFT Creators

This survey questionnaire helps in collecting data from the resident NFT creators (mainly nonfinancial corporations) to support the compilation of items related to them (output, exports, and intermediate consumption) following the *BPM7* and *2025 SNA* frameworks.

Section 1: General Information

1.4 Legal name of the reporting entity 1.2 Country of incorporation and registration 1.3 Contact person (name, title, email, phone) 1.4 Reporting period (start and end dates)

Section 2: Output and Intermediate Consumption of NFT Creators

Type 1: Provide personal use and display rights (Examples: NBA Top Shot Moments, Digital collectible soccer cards with player NFTs such as Sorare, NFL All Day—Official NFT collectibles from NFL, Formula 1 Delata Time

Type 2: Provide ownership of the NFT and display rights (Examples: CryptoPunks, Bored Ape Yacht Club, Meebits)

Type 3: Provide ownership via transfer of the NFT (Examples: RealT Properties, Propy Real Estate NFTs)

Item		Year t
2.1 Number of NFTs minted during the period	Units	
2.2 Type of NFT (Type 1/2/3) • Type 1 • Type 2 • Type 3		
2.2 Number of NFTs sold during the period (units and value)	Units USD	
Of which sold to nonresidents (units and value)	Units USD	
2.3 Royalties from secondary sales (charges for use of intellectual property n.i.e.)	USD	

Of which from nonresidents		
2.4 Other income (specify) Of which from nonresidents	USD	
2.5 Input costs related to minting of NFTs	USD	
2.5.1 Remuneration of employees Of which paid to nonresidents	USD	
2.5.2 Blockchain transaction fee Of which paid to nonresidents	USD	
2.5.3 IT, admin, and other expenses Of which paid to nonresidents	USD	
2.5.4 Interest Of which paid to nonresidents	USD	
2.5.5 Other expenses Of which paid to nonresidents	USD	

Chapter 4. COUNTRY EXPERIENCES AND INTERNATIONAL INITIATIVES

A. INTRODUCTION

1. The chapter presents the experiences of selected countries in the collection and compilation of crypto assets statistics, as well as initiatives by international organizations to develop such statistics at the global level. It is organized into two main sections in addition to the introduction. Section B presents case studies from Brazil, Estonia, Germany, Georgia, and Switzerland. Section C highlights collaborative projects such as Project Atlas and Project Pyxtrial, led by international organizations like the Bank for International Settlements (BIS).

B. COUNTRY EXPERIENCES[26]

2. Each country's experience presented in this section is discussed in terms of its data collection frameworks, reporting systems, regulatory developments, and the challenges faced in compiling statistics on crypto assets. For example, Brazil's approach centers on the International Transactions Registration System (ITRS), Estonia's on integrated reporting for virtual asset service providers, and Germany's on direct reporting mechanism.

B.1. BRAZIL

Data Collection Framework

3. The Central Bank of Brazil (BCB) compiles crypto assets statistics with data sourced from foreign exchange transaction contracts settlements, i.e., an International Transactions Registration System (ITRS). The ITRS is the source for compiling statistics of most of the balance of payments components in Brazil. In BCB's ITRS, financial institutions conducting foreign exchange settlements register the purchase and sale transactions of foreign currency based on information provided by the resident counterparty of the foreign exchange transaction. Among the information provided is the description of the nature of the transaction, based on a list with approximately 100 foreign exchange codes; the transaction value; and the identification of the resident and non-resident parties of the transaction. Among the foreign exchange codes, there are two for recording transactions with crypto assets. The recorded information also includes a free-text field "Other Specifications" where additional details about the foreign exchange transaction can be included. See **Annex 4.1** for a sample foreign exchange contract.

4. The BCB requests financial institutions to identify the names of the crypto assets in the "Other Specifications" text field for foreign exchange transactions, following a text pattern (e.g., USDT or BTC). This identification is essential to determine the type of crypto asset being purchased or sold and where it should be classified in the balance of payments (if the crypto asset has no corresponding liability, e.g., Bitcoin, it is classified in the capital account; if it has a corresponding liability, e.g., stablecoin or CBDC, it

[26] The country experiences, including data collection and compilation methods, are based on materials shared by the national compilers and should not be viewed as endorsed by the IMF Statistics Department.

is classified in the financial account) and, if applicable, in the IIP. In the case of Brazil, purchases of crypto assets significantly outweigh sales. In 2024, for example, total purchases were US$18.2 billion, and sales were US$1.5 billion.

Compilation of BOP Transactions in Crypto Assets

5. Transactions recorded in foreign exchange contracts are transmitted to BCB by financial institutions in XML files each month, which are processed and stored in a database. The records are loaded into a balance of payments data warehouse (DW). During the upload process, the records are allocated to specific balance of payments accounts according to predefined rules, according to the type of transaction (purchase/sale), the foreign exchange code, and the resident's institutional sector. During the compilation process, the data is validated and, if necessary, can be altered so that the allocation in the balance of payments more adequately reflects the economic nature of the transaction.

6. Foreign exchange contacts related to crypto assets are extracted by a text reading and processing algorithm, which identifies the informed crypto assets and the value associated with each crypto asset. The crypto asset is compared to a reference list, as shown in Table 4.1, and then the transaction value is categorized as with or without corresponding liability. If the crypto asset is not yet found in the list, verification is made to determine which category it fits, and it is then added to the list. The verification of the category of each crypto asset is conducted through internet searches to determine whether they have corresponding liability or not.

Table 4.1. Example of the Reference List of Crypto Assets

Code	Name	With or without corresponding liability
USDC	USD Coin	With corresponding liability
BTC	Bitcoin	Without corresponding liability
USDT	Tether	With corresponding liability
ETH	Ethereum	Without corresponding liability

7. In the last quarter of 2025, the names of the currencies had been recorded in approximately 80% of the crypto asset purchase records and 67% of the sale records. This proportion has progressively increased. BCB’s goal is, through monitoring activities of the records, to reach 100% for both purchase and sale.

8. The BCB seeks to identify other official sources of information to complement and/or assist in validating the current existing information. The Federal Revenue of Brazil publishes data on transactions with crypto assets declared by residents, but without determining whether the transaction is domestic or between a resident and a non-resident. Although it does not constitute a direct data source, it allows verifying which types of currencies are being transacted, and the evolution of crypto asset use in Brazil.

Challenges and the Way Forward

9. Currently, there are no available data sources on transactions in which crypto assets are used as a means of payment, be it for the acquisition of goods and services or for investing abroad in other types of assets. The BCB has proposed new data reporting procedures for resident virtual asset service providers. The proposed reporting procedures for the resident virtual asset service providers establish that cross-border transactions involving payments, transfers, or exchanges of crypto assets should be reported to the BCB. These transactions should be reported with details similar to the ITRS, including information on related parties, type of crypto asset, and nature of the transaction. Data should be reported and included in the balance of payments on a monthly basis. At present, there are currently no proposed procedures for reporting crypto asset positions by type of asset.

B.2. ESTONIA

Background

10. Since 2018, Estonia's crypto sector has expanded rapidly, driven in part by limited restrictions—such as a low threshold for due diligence obligations and the absence of a clear legal basis for the Financial Intelligence Unit (FIU) to deny license applications. The sector reached its peak in 2019, when more than 1,200 virtual asset service providers (VASPs) were operating in the country. However, this trend reversed after the Parliament adopted significant amendments to the *Money Laundering and Terrorist Financing Prevention Act* at the end of 2019. These amendments tightened the regulatory standards for virtual currency service providers, introducing stricter requirements related to physical presence, payment accounts, minimum share capital, and customer identity verification. Further amendments, which came into force in 2022, imposed additional obligations, including higher capital requirements, mandatory external audits, and stricter conditions for board members.[27] In 2023, the Ministry of Finance introduced new regulations requiring VASPs operating in Estonia to submit regular reports on their activities, effective from January 1, 2024. By the end of 2023, as a result of the above-mentioned regulatory amendments, the number of licensed service providers had declined to around 50.

Data Items Collected

11. VASPs reports stipulated by the Ministry of Finance are integrated reports[28] used both for supervisory purposes by the Financial Intelligence Unit and for the compilation of official statistics by Eesti Pank. Data are collected quarterly through the following reports.

12. **The Report on General Activity** provides information on the location, websites, brands, acceptance of cash payments, number of crypto ATMs, number of customers, and number of customers subject to due diligence measures. The websites of service providers offer an overview of their service packages and can help identify potential sources of income. While most providers limit their services to the purchase and sale of crypto assets, around ten offer a wider range of activities, including copy trading,

[27] Estonian Financial Intelligence Unit Yearbook 2021, https://fiu.ee/sites/default/files/documents/2022-07/RAB_aastaraamat_ENG_veebi.pdf

[28] Integrated reporting is a data collection needed for different purposes including balance of payments, of several stakeholders. In the data collection, reporting agents are aware of what purposes the data are used for. Data are collected only once and shared with the appropriate stakeholders. Integrated reporting reduces the reporting burden and ensures a better consistency of data.

auto-investment services, crypto loans, off-chain staking, transfers, crypto payment solutions, and the issuance of virtual and physical cards.

13. **Balance sheet items** in these reports are disaggregated by residency—distinguishing between residents and nonresidents—while **income statement** items are generally presented without a residency breakdown, except for *sales revenue* and *goods, raw materials, and services*, for which nonresident totals are separately reported.

14. **The Report on Customers' Assets** contains quarterly information on customers' asset holdings, disaggregated by type of asset, type of customer, and residency. Assets are classified as follows: fiat currency; major crypto assets among the global top ten by market capitalization, namely Bitcoin, Ethereum, BNB, Cardano, and Tether (the most widely used stablecoin); privacy-enhancing crypto assets such as Monero, Zcash, and Dash; crypto assets issued by the service providers themselves; and other crypto assets. Customers are categorized as banks, other financial institutions, other legal entities, natural persons, and politically exposed persons.

15. **The Report on Virtual Asset Services Provided** presents quarterly turnover data by type of service, type of customer and residency, type of ultimate beneficiary, number of customers, number of transactions, and value of transactions. The services are classified as follows:

- exchange between fiat currency and crypto assets (and vice versa);
- exchange between different crypto assets;
- services related to organizing offers or sales and related financial services;
- transfer services; and wallet services

Ultimate beneficiaries are classified as residents, nonresidents, or mixed (involving both). Turnover data cannot be disaggregated by type of asset.

Challenges and the Way Forward

16. In December 2024, the EU regulation on markets in crypto-assets (MiCA) came into force. Whereas previously VASPs operated under the law of the respective Member State, the EU established uniform rules for market participants. As a result, applications for an authorisation to provide virtual currency service were moved to the Financial Supervision Authority. This in turn has initiated further changes to the reporting.

17. Overall, the integrated framework for data collection provides a very good starting point for compiling the flows and stocks of crypto assets in the national accounts and external sector statistics, in line with the *BPM7* and *2025 SNA* frameworks. However, to obtain a more comprehensive picture, it is important to emphasize the need for information on customers' holdings with service providers registered in other countries—that is, the participation of residents in cross-border crypto markets from a macroeconomic statistical perspective. Moreover, the coverage of crypto assets that interact directly with the blockchain remains an open issue, as crypto assets transferred to customers' own wallets fall outside the scope of existing reporting systems. Box 4.1 provides key observations based on 2024 crypto assets data.

Box 4.1. Estonia: Key Observations Based on 2024 Crypto Assets Data

The number of service providers' customers varied between 1.4 and 1.6 million, and out of 45–50 service providers, only 3-5 companies had more than 100,000 customers.

Crypto assets of customers are more than 2 billion euros of which around 98 percent belonged to nonresident customers. Over 90 percent market share was formed by 4 enterprises, with nonresident customers from specific regions. Over 85% of customers are natural persons while 10-15 percent are other legal persons. The highest share of crypto holdings are Bitcoin and Ethereum, which represent one-third and 15 percent of customers total assets respectively. Stablecoin Tether forms around four percent and is used mainly by companies from off-shore countries. Both privacy-enhanced crypto assets and assets issued by the service providers have unremarkable share. Other crypto assets have share between 35-40 percent which indicates an importance to have more detailed look on them, in order to distinguish centrally issued stablecoins and security crypto assets from other crypto assets.

Services of providing crypto assets against fiat currency have higher proportion in comparison to other types of services where fiat currencies are provided against crypto assets or crypto assets are exchanges to other crypto assets. However, high turnovers of transfers and wallet services in comparison with net figures from the crypto buying and selling including the positions of customers assets may indicate the flow of cryptos to their customers non-custodial wallets that falls then outside the scope of the surveys. In addition, the majority of turnover by Estonian resident companies is formed by the turnover where the actual beneficiaries are nonresidents (i.e., natural persons who ultimately own or control a legal person through direct or indirect ownership).

Figures from report of services should be carefully interpreted due to the fact that types of services can be double-recorded and do not always show the direction. For example, wallet services and transfers may be mixed if customers transfer funds from their wallets to other customers wallets. In addition, revenue from staking can be recorded under wallet services and other services. Concrete direction is not detectable (e.g., from staking activities including main amounts, and crypto borrowing).

B.3. GERMANY

Direct Reporting System for Transactions

18. In Germany, a direct reporting mechanism that generally mandates all domestic sectors to report their international transactions is used as one of the main sources for the compilation of the balance of payments. The threshold for reporting starts at payments of more than €50,000. This filters out smaller transactions and reduces the reporting burden on entities while at the same time not significantly impacting the overall economic statistics. The German reporting system is governed by the Foreign Trade and Payments Act (Außenwirtschaftsgesetz - AWG), the Foreign Trade and Payments Regulation (Außenwirtschaftsverordnung - AWV). It also adheres to relevant EU regulations and international trade agreements and since 2025 explicitly includes transactions involving crypto assets.

19. Reporting agents in Germany are obligated to provide detailed information for each transaction containing crypto assets. This includes the value of the transaction, the direction of payment — indicating

whether it is an inflow or outflow of cryptos—and the purpose[29] of the transaction. Additionally, any other relevant information that may assist in the accurate classification and analysis of the transaction should also be included.

20. Furthermore, the mining of crypto assets, such as Bitcoin, is reported under computer services.[30] Beyond the transactions, the reporting system also takes swaps[31] of crypto assets into account. In these cases, reporting agents are asked to report both sides of the transaction.

21. Four new codes have been established under the direct reporting system for transactions. This differentiation is necessary to assign reported transactions to the appropriate sub-accounts (e.g., the capital account for nonfinancial non-produced crypto assets).

I. The first pertains to crypto assets that do not have a corresponding liability, categorizing them as nonfinancial assets.

II. The second addresses foreign crypto assets that are associated with corresponding liabilities, categorizing them as financial assets.

III. The third focuses on domestic crypto assets that also have corresponding liabilities, categorizing them as financial assets as well.

IV. The fourth is dedicated to nonfungible tokens (NFTs), which are classified as nonfinancial assets.

22. Currently, positions in crypto assets, relevant for the international investment position (IIP), do not have to be reported directly. For nonfinancial crypto assets this remains without consequence, since they are not part of the IIP. For financial crypto assets, the respective positions are calculated by cumulating transactions. While this method is certainly not an accurate one for assets with volatile market prices, it is for now regarded as acceptable by the Bundesbank. In Germany, the current volume of transactions in financial crypto assets is quite low—especially compared to the overall IIP—and financial crypto assets (e.g., certain stable coins) are often less volatile making the cumulation of transactions less inaccurate.

23. Data quality management methods for reported transactions in crypto assets include, among others, plausibility checks of the reports. For instance, the plausibility of the reported amounts or description is assessed in combination with the direction of the transaction or any other issue[32] during those quality checks. In general, cases can also be solved by communicating with the reporting agent, although—for efficiency reasons—this is only done for transactions above a certain threshold.

[29] This typically involves specifying the name of the crypto asset involved as well as indicating if it is an acquisition or a sale.

[30] The activities of miners/validators are considered as the provision of validation services in *BPM7*. This includes the implicit (i.e., the block reward) and explicit fee.

[31] The term "swaps" refers in this case to the exchange of one type of crypto asset for another, distinguishing it from transactions that involve the exchange of a crypto asset for a classical financial asset, such as money.

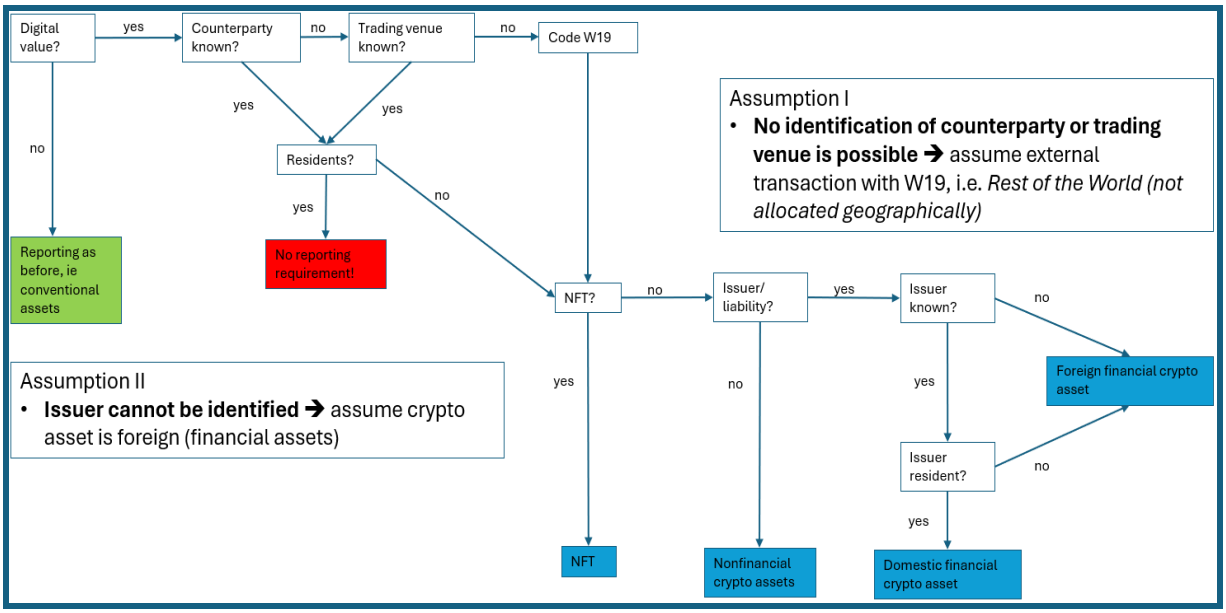
[32] For example, reporting an ISIN could indicate that the reporting agent is using the wrong reporting code and meant to report a transaction in securities.

Reporting and Compilation Practices

24. The classification of crypto assets with respect to the different types and geographical counterparts is described by a decision tree, see **Figure 4.1**. It is based on two important assumptions and can be applied in the following way.

25. The first step – besides ensuring that the transaction is indeed containing a digital asset, and the decision tree is therefore applicable – is the identification of the geographical location of the counterpart. Preferably, the reporting agent is able to identify the counterpart or at least the country of residence of the counterpart. If this is not the case and the reporting agent does not know who the counterpart of the transaction is, the country of residence of the trading venue can be used as a second-best solution. In case the country of residence of the counterparty is then assessed to be domestic, the transaction is no external transaction and no reporting is required. If the reporting agent is unable to either identify the location of the counterpart or the location of the trading venue, then the reporting agent should assume that the counterpart to the transaction is located abroad without further specification (Assumption I) and use the country code of W19 (not allocated geographically).

Figure 4.1. Decision Tree for Classifying Type and Geography of Crypto Assets



26. The second step is to determine the type of crypto asset. The decision tree checks for the four different types of crypto assets identified by the codes described in paragraph 5. The first check is to determine whether the respective asset is an NFT. If it is not an NFT, the second step is to check if the asset has a corresponding liability. In this context, checking if the asset has an issuer may serve as an indicator. If no corresponding liability exists, the reporting code for the nonfinancial crypto assets should be used. If a corresponding liability exists, the asset is a financial crypto asset, and it is necessary to identify if the asset is a domestic or foreign asset. In case it is not possible to identify the location of the issuer, it should be assumed that the crypto asset is foreign (Assumption II). Based on the outcome, reporting agents should be able to use the code for foreign or domestic financial crypto assets.

Challenges and Way Forward

27. There are several challenges with reporting and compilation of crypto assets. These challenges can be caused by the general characteristics of crypto assets or the properties of the German reporting system.

28. In general, the crypto asset market is very dynamic leading to rapid appearances and disappearances of business models, crypto assets, sudden changes in counterparties' information on (crypto) trading platforms[33], as well as other issues. Additionally, crypto assets are often deliberately designed to be (pseudo-)anonymous making it difficult or even impossible for reporting agents to determine the respective counterparty and/or country of the counterparty. This can also be seen in the mining of crypto assets leading to overall higher amounts in W19. Additionally, the implementation of a reporting system of crypto assets requires the training of compilers and the provision of comprehensive information about the reporting requirements for the (potential) reporting agents.

29. More specific to the German reporting system are issues regarding the recording of the use of crypto assets for the payment of goods or services, which is not always possible. Furthermore, the current reporting system in Germany does not facilitate the precise identification of the type of crypto asset[34] being traded. As mentioned above, there is currently no direct collection of stocks of crypto asset, although this is only relevant for financial crypto assets. Finally, there are two more caveats: (i) the German reporting system does not allow to separately identify digital versions of conventional financial assets, although they are generally being collected and (ii) the different types of NFTs cannot be distinguished (i.e., all NFTs are treated as NFTs[35] with limited ownership rights to a specified asset or commodity that go beyond personal use).

30. Looking ahead, some adjustments are planned for the collection and compilation of crypto assets in Germany. In the medium term, it is intended to implement a coding system that allows the identification of the specific type of crypto asset within a transaction. For example, the Digital Token Identifier[36] could be used for this. A second idea is to change the compilation system by getting the data on transactions and positions directly from big players in the market, like crypto exchanges or crypto asset service providers. This approach could lessen the reporting burden by limiting the current reporting obligation for the entire reporting population to just a few reporting entities. In the long term it is envisioned to differentiate digital versions of conventional financial assets in separate "of which" positions in the respective functional categories (e.g. crypto bonds, crypto derivatives, etc.).

[33] For instance, in 2025 some crypto market providers changed their operating counterparty unit for German customers from a German to a foreign counterpart.

[34] Beyond the four different general types of crypto assets indicated by the reporting codes given in paragraph 5.

[35] NFTs are described in more detail in BPM7 chapter 16.

[36] See dtif.org

B.4. GEORGIA

Virtual Assets[37] Mining

31. Georgia has emerged as a prominent hub for virtual asset mining, gaining international recognition for its favorable operating conditions. This attractiveness is largely driven by low electricity costs, enabled by access to hydroelectric power, and the presence of Free Industrial Zones with minimal regulatory burdens. However, the rapid growth of mining activities has introduced regulatory and infrastructure challenges.

32. Between 2017 and 2021, the surge in electricity demand, primarily linked to virtual asset mining, transformed Georgia from a net exporter to a net importer of electricity. Moreover, Georgia lacked formal regulations governing virtual asset mining and trading, allowing individuals and entities to operate with minimal oversight. Individual miners and traders were exempt from taxation, while businesses engaged in virtual asset-related activities were generally subject to a 15% corporate income tax and 18% value-added tax.

33. Georgia also offered a conducive environment for establishing legal and tax residency, facilitating the conversion of virtual assets into fiat directly through bank accounts. Additionally, both residents and non-residents had the option to purchase real estate using virtual assets, further enhancing the country's appeal as a crypto-friendly jurisdiction.

Survey Module on Mining

34. Despite Georgia's global standing in virtual asset mining, there remains a notable lack of comprehensive data on the sector. The National Statistics Office of Georgia (Geostat) has making continuous efforts to identify and survey entities involved in virtual asset-related activities, including analyzing GPU importers and businesses operating in mountainous regions known for mining. An ad-hoc module with questions (see Table x) on virtual asset mining activity was incorporated into the broader External Economic Activities of Enterprises survey.

[37] Virtual Asset — the term used in Georgian legislation as the functional equivalent of "Crypto" or "Crypto Asset." Whilst might not be exact equivalent, it covers the similar characteristics.

Table 4.2. Questions on Virtual Assets Mining Activity

(Annex to the Survey Questionnaire on External Economic Activities of Enterprises)

Crypto currency		**Total**	**Q1**	**Q2**	**Q3**	**Q4**
A	B	C	C1	C2	C3	C4
Number of Bitcoins mined during the reported period	Units					
Value of Bitcoins mined (at price of the day of the transaction)	Currency					
Fees received for validating the transactions	Currency					
Number of Bitcoins sold to nonresidents	Units					
Of which through the domestic intermediary (e.g., E-Money)	Units					
Funds received from parent company						
Other than loans and funds in equity	Currency					
Fixed assets (e.g., computers, servers, etc.)	Currency					
Intellectual property	Currency					

Virtual Asset Service Providers

35. In September 2022, the Parliament of Georgia passed the amendments in several laws introducing legislative framework for Virtual Assets (VAs), Virtual Asset Services (VAS) and Virtual Asset Service Providers (VASPs) which became effective on January 1, 2023. Among others, the amendments covered the Organic Law of Georgia "On the National Bank of Georgia" and the Law of Georgia "On Facilitating the Prevention of Money Laundering and the Financing of Terrorism". In accordance with the legislative framework, the National Bank of Georgia (NBG) has the authority to supervise VASPs that includes mandatory registration regime of VASPs (that includes but not limited to requirements on Head office, systems, Fit and Proper Checks, Anti-Money Laundering/Countering the Financing of Terrorism (AML/CFT) Policy Procedures) and AML/CFT supervision. Further, VASPs are obliged to comply with the Travel Rule[38] requirement by the end 2026.

36. VASP is an institutional unit that provides virtual asset service for the benefit of another unit. In addition to VASPs, the following representatives of the financial sector are authorized to provide virtual asset services: commercial banks, micro-banks, microfinance organizations, and brokerage companies. Table 4.3 provides details on the list of the VAS as defined by the law and specifies whether provision is

[38] The travel rule requires VASPs to transmit specific identifying information about the sender (name, account number/wallet address, physical address, national ID, etc.) and receiver (name, account number/wallet address) of a virtual asset transfer along with the transaction, much like how banks share such information in wire transfers.

reserved for VASPs or also permitted for financial sector representatives. At the time of preparation of this section (October 2025), there are 28 VASPs registered.[39]

Table 4.3. Institutional Units Providing Virtual Asset Services

Virtual Asset Service	VASP	Commercial Bank	Micro - Bank	Microfinance Organisation	Brokerage Company
Exchange (including via kiosks) between convertible virtual asset and fiat currencies (national or foreign) between one or more forms of virtual assets, between convertible virtual asset and financial instrument	X	X	X	X	X
Transfer of convertible virtual asset	X	X	X	X	X
Safekeeping and/or administration of convertible virtual asset or of the instrument enabling control over virtual asset	X	X	X	X	X
Portfolio management of convertible virtual assets (excluding collective portfolio management)	X				
Administration of the trading platform of the convertible virtual assets	X				
Lending of convertible virtual asset (to legal entities only)	X				
Initial Coin Offering of convertible virtual asset and/or service related to initial coin offering	X				

Challenges and Way Forward

37. The mining entities have largely been uncooperative, limiting the effectiveness of data collection efforts and leaving significant gaps in understanding the scale and impact of mining operations. While high electricity consumption has offered indirect insights into virtual asset production, such indicators remain incomplete and imprecise. Overall, measuring the activities of virtual asset mining companies has proven difficult, contributing to persistent data gaps.

38. With regards to VASPs, the National Bank of Georgia is in the process of developing a remote supervisory framework—commonly referred to as off-site monitoring—under which VASPs registered in Georgia will be required to report information related to their customers, transactions, products, services, counterparties, and delivery channels. This framework is expected to enhance supervisory visibility,

[39] See the official website of the National Bank of Georgia for the register: https://nbg.gov.ge/en/page/virtual-asset-service-providers-vasps

including over potential cross-border transactions, thereby contributing to improved oversight and alignment with international compliance standards.

B.5. SWITZERLAND

Background

39. Switzerland's financial-market regulation is technology-neutral: The Swiss Financial Market Authority (FINMA) applies existing financial-market laws to crypto-related services and, where needed to meet supervisory objectives, issues targeted guidance and pursues focused legal extensions rather than creating a separate crypto statute. Since 2014 this has included supervisory guidance and key updates: ICO Guidelines (2018) categorizing tokens by economic function (payment, utility, asset, hybrids), and the DLT framework (2021) introducing ledger-based securities in the Code of Obligations, segregation rules for digital assets in bankruptcy law, and new infrastructures or licensing options (e.g., DLT trading facility, fintech firm license). FINMA operationalizes its guidance via surveys and defined reporting positions; given early uncertainties, close accompaniment of institutions during implementation was essential.

Crypto Assets Reporting

40. FINMA's crypto asset reporting is grounded in the DLT framework and the powers introduced by Article 4 of the Banking Act (BA), under which FINMA may set institution-specific maximum holdings of crypto-based custodial assets where warranted by risk. The reporting provides consistent, standardized evidence based on institutions' crypto-related activities and exposures to inform potential thresholds under Article 4 and to support FINMA's broader, risk-based supervision. The survey covers banks and securities houses licensed by FINMA that have notified the authorities of crypto activities (e.g. following changes to organizational rules); once notified, reporting is mandatory. Collection began in September 2023, on a quarterly basis, with reporting required at both the solo (entity) and consolidated (group) level.

41. Data are collected along two complementary dimensions:

- Institution-level business areas and volumes: custody, client trading, own-account trading, transfers to/from external wallets, operation of an organized trading facility, issuance of crypto-based products, crypto-collateralized lending, tokenization, and staking; plus positions such as tokens and crypto asset-related funds on balance sheet, receivables in tokens, tokens used as collateral for credit-risk mitigation, structured products, and linear/non-linear derivatives, as well as other crypto-related activities.
- Per-token details: token name/symbol, DLT/network, total token holdings and price, and custody breakdowns (nostro; individualized vs pooled client custody; fiduciary arrangements), with functional tagging (payment/utility/security tokens). The custody/staking module also distinguishes self- vs third-party custody, client segments, insurance coverage, and the network of service providers/sub-custodians.

Supervisory Reporting

42. Separate from the crypto asset survey, FINMA's Supervisory Reporting—mandated under the FINMA accounting framework—requires all banks and securities houses to report fiduciary crypto assets held for clients that are segregable in bankruptcy (i.e. off-balance-sheet positions) since 2020. For *BPM7* purposes, these amounts belong to the clients as the economic owners and should be attributed to the clients' resident/nonresident sector (not to the custodian).

Challenges and Way Forward

43. Implementation and coverage**:** Preparatory work to implement *BPM7*, *2025 SNA*, and the update of *ESA 2010* has begun, but adapting and extending statistical source data is a multi-year process that requires careful sequencing, especially given today's limited coverage of crypto-asset activities. To meet growing requirements, regulator-driven data collections (e.g., FINMA's crypto-asset survey and Supervisory Reporting) are being reviewed for targeted expansion, adding residency/sector/counterparty-country attributes and transactions vs. valuation split, and exploring issuer-side modules where needed. These steps are designed to align intermediary-based evidence with *BPM7* concepts and the DGI-3 Recommendation 11 templates.

44. Measurement challenges**:** Technology and business models evolve quickly, while statistical frameworks prioritize consistency over time and reliability. Switzerland's statistical production relies heavily on institutional reporters, yet early crypto-asset activity was deliberately organized outside regulated (and thus surveyed) intermediaries. This creates coverage gaps and practical identification issues. Pseudonymity and world-wide decentralization make it difficult to reach relevant survey subjects and to attribute residency, sector, and geography to ultimate holders.

45. Outlook: As crypto activities continue to (re)institutionalize—with assets increasingly held via supervised platforms and traditional intermediaries entering the market—data availability and quality are expected to improve. In parallel, Switzerland will assess complementary sources (administrative/market data) and, where appropriate, blockchain analytics to support interim attribution and plausibility checks, coupled with transparent metadata on methods and limitations. This pragmatic, staged approach should progressively close the most material gaps for *BPM7* and DGI-3 reporting while preserving coherence with the broader statistical system.

B.6. Reflections on the Country Experiences

46. Overall, the experiences presented in this section show that countries are at different stages of developing data on crypto assets, reflecting variations in scope, data sources, and institutional arrangements. In many cases, current efforts are partial, focusing on specific components of the national accounts or external sector statistics, or on flows and stocks derived from a single data source, such as regulatory reports. Notwithstanding the challenges faced, these county experiences represent an important step aimed at incorporating crypto assets within the *BPM7/2025 SNA* statistical frameworks. With the notable example of Brazil, which has integrated crypto assets into its balance of payments, most other country experiences currently relate to data collection initiatives that lay the foundation for more comprehensive compilation in the future.

C. INTERNATIONAL INITIATIVES

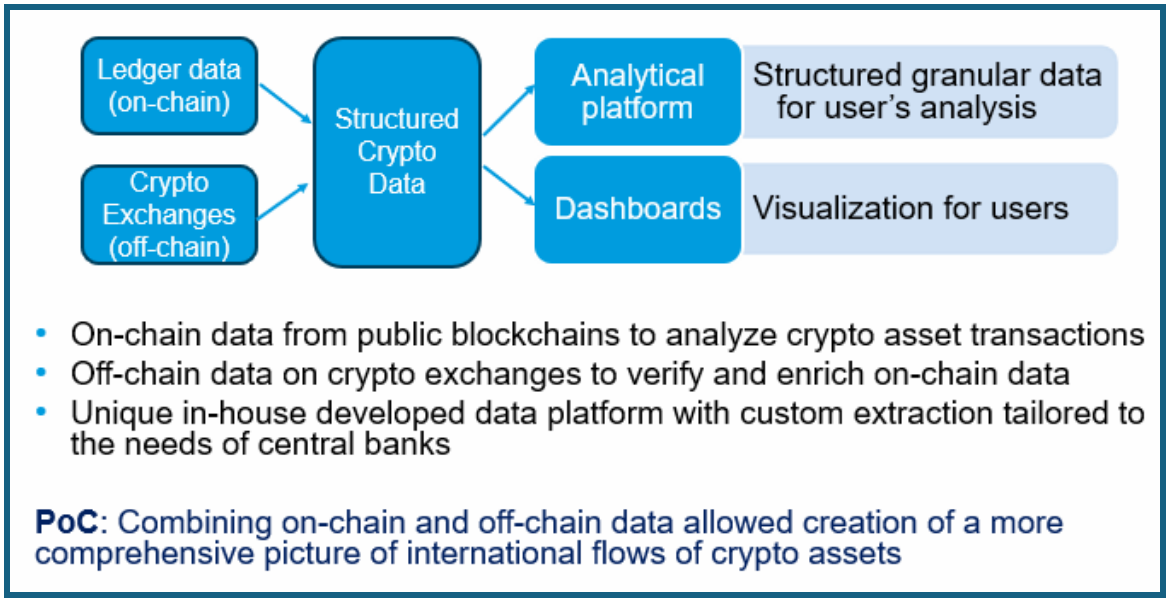
47. The initiatives presented in this section focus on bridging data gaps, integrating on-chain and off-chain data, and enhancing supervisory capabilities for crypto assets and stablecoins.

C.1. PROJECT ATLAS

48. Project Atlas is an international initiative led by the Bank for International Settlements (BIS) Innovation Hub Eurosystem Centre in collaboration with De Nederlandsche Bank and the Deutsche

Bundesbank, aimed at addressing data gaps in crypto assets and decentralized finance (DeFi).[40] This project works to establish a robust data platform that integrates the data procured from crypto exchanges (off-chain data) with granular data derived from public blockchains (on-chain data)—see Figure 4.2. The emphasis of the project is on facilitating the macroeconomic analysis of the crypto and DeFi markets. Currently, the project is in the proof-of-concept (POC) phase and is open for other central banks to join (subject to approval of other existing members). The project will result in two products: structured granular data for user analysis, and a dashboard with visualizations for users.

Figure 4.2. BIS IH Project Atlas – The platform



49. The initial focus of the project has been on mapping significant international flows between crypto exchanges. Cross-country analysis has been done based on the location of crypto exchanges. It is important to note that transactions are classified as cross-country based on the residence of crypto exchanges. As discussed in Chapter 3, assets held in custody by crypto exchanges should not be treated as assets of the exchanges or custodians, as they remain the assets of the original holders (i.e., the customers of the exchanges). Consequently, the cross-border flows tracked by the Atlas project should be assessed from the perspective of the exchanges' customers to estimate the actual cross-border components.

50. Despite its limitations, the data from this project can be useful for understanding trends in cross-border crypto flows, thereby improving the measurement of the balance of payments and international investment position data. At the same time, compilers need to remain mindful of the data limitations and challenges, such as residency attribution, ownership versus custody (particularly in the case of exchanges), counterparty sector identification, and uncertainty about the purpose of transactions. These limitations imply that while Project Atlas can significantly enhance the understanding and analysis of crypto-related activity, its datasets require careful interpretation and methodological adaptation before integration into official macroeconomic statistical frameworks.

[40] For additional details, refer to the report *Project Atlas: Mapping the World of Decentralized Finance*.

C.2. PROJECT PYXTRIAL

51. Project Pyxtrial is an innovative supervisory technology (suptech) initiative developed jointly by the BIS Innovation Hub and the Bank of England.[41] The project's core objective is to enable regulators to verify that stablecoin liabilities recorded on blockchains are fully backed by segregated assets held off-chain by issuers. To achieve this, Pyxtrial integrates granular on-chain data—collected hourly from multiple blockchains covering five leading stablecoins—with off-chain asset data submitted by stablecoin issuers via application programming interfaces (APIs).

52. Project Pyxtrial helps regulators keep track of stablecoin issuers' balance sheets in near real-time by combining different data sources. It uses a flexible system built around a detailed data model that organizes assets, valuation methods, and token information. While the project does not independently assess the quality or value of assets, it helps spot mismatches between assets and liabilities and highlights potential data problems quickly. The system is designed to adapt to changing rules and can be expanded to include more types of crypto assets and different countries. It also uses advanced data management to keep historical records important for supervision. A user-friendly dashboard allows supervisors to see the data clearly and check its quality. Some challenges remain, such as the need for more consistent and frequent reporting of off-chain assets, valuing assets correctly, tracking assets across multiple blockchains, and protecting data privacy when working internationally. Despite these issues, project Pyxtrial is an important step forward in improving how stablecoins are supervised in the crypto financial world.

53. While the data from this project are not primarily intended for macroeconomic statistics, information on the assets and liabilities of stablecoins can serve as a useful supplementary source for compiling such statistics.

[41] For additional details, refer to the report *Monitoring the Backing of Stablecoins*.

Annex 4.1. Brazil. Sample Foreign Exchange Contract

Foreign Exchange Contract
Type of foreign exchange contract ( ) purchase ( ) sale
Foreign exchange contract number:
Institution authorized to operate in the foreign exchange market Name: Resident identification number: Address:
City, State
Name of forex settling party: Resident identification number /Foreign ID: Address:
City State Country
Intermediary institution Name: Resident identification number /Foreign ID: Address:
Transaction data Currency of transaction: Value in foreign currency: Value in domestic currency: FX rate: Contract date: Settlement date:

Nature of the operation Code: Process number: Registration number:
Payment/receipt abroad Correspondent bank abroad: Correspondent bank code abroad: Full name and address of the payer/receiver abroad:
Other specifications
Contractual clauses

Questions for the AEG/BOPCOM:

1. *Do AEG/BOPCOM members agree with the scope of data sources and compilation methods presented in Chapter 3?*
2. *Do AEG/BOPCOM members agree with preparing a clarification note on the recording of stablecoin revenue and USDC rewards in macroeconomic statistics?*
3. *Do AEG/BOPCOM members have suggestions for including any other cases of country experiences in Chapter 4?*
4. *Do AEG/BOPCOM members agree with posting these chapters for global consultation (together with Chapters 1 and 2) after addressing the comments from members?*