Thirty-First Meeting of the
IMF Committee on Balance of Payments Statistics

Washington, D.C.
October 24–26, 2018

BOPCOM—18/15
For discussion

External Sector Statistics-Specific Issues in Economies Using as Legal Tender US Dollars, Euros, or Other Currencies Issued by a Foreign Monetary Authority

Prepared by the Statistics Department

INTERNATIONAL MONETARY FUND

External Sector Statistics-Specific Issues in Economies Using as Legal Tender US Dollars, Euros, or Other Currencies Issued by a Foreign Monetary Authority[1]

The paper presents specific statistical issues emerging from the use as legal tender of currencies issued by a foreign monetary authority. It tackles the currency classification; the estimation of balance of payments transactions in banknotes and coins; the estimation of foreign currency in circulation; and aspects related to reserve assets, including the reporting of the Data Template on International Reserves and Foreign Currency Liquidity (RDT). It proposes in particular to recommend dollarized/euroized[2] economies to compile separately (a) Monetary Authority and (b) Central Government excluding social security funds in the RDT. This paper is a revised version of the paper presented to the Committee at its 2018 meeting and it incorporates comments received from the Committee through written procedure.

I. Introduction

1. **Some economies use a currency issued by a foreign monetary authority as legal tender.** This phenomenon usually takes place in developing countries with unstable economic environment and high inflation, which choose to use a stable foreign currency, like the U.S. dollar, to conduct day-to-day transactions in substitution of the country's domestic currency.

2. **This paper tackles the following issues:** (i) the classification in external sector statistics (ESS) and monetary and financial statistics (MFS) of the foreign currency used as legal tender; (ii) the identification of ESS transactions; (iii) the estimation of foreign currency in circulation; and (iv) aspects related to reserve assets, including the reporting of the Data Template on International Reserves and Foreign Currency Liquidity (or Reserves Data Template (RDT)) in the specific case of dollarized economies.

II. Currency Classification

3. **In ESS, a currency issued by a foreign monetary authority that is used as legal tender is classified as foreign currency (i.e., domestic holders are deemed to hold an external asset).** *BPM6,* paragraph 3.96 states "…an economy that uses as its legal tender a currency issued by a monetary authority of another economy—such as U.S. dollars—or of a

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[2] For simplification purposes, the terms "dollarized" or "dollarization" will be used in this paper to denote the use of US dollars, euros, or other currencies issued by a foreign monetary authority. Currently, some of the countries that have the US dollar as legal tender are: Ecuador, El Salvador, Marshall Islands, Micronesia, Palau, Panama, Timor-Leste, Turks and Caicos, the Virgin Islands, and Zimbabwe (the latter along with other eight foreign currencies). Other examples are Kosovo and Montenegro—and the micro-states Andorra, Monaco, San Marino, and the Vatican City—that have the euro as legal tender; and Nauru and Niue, which use Australian and New Zealand dollar, respectively.

common currency area to which it does not belong should classify the currency as a foreign currency, even if domestic transactions are settled in this currency."

4. **In MFS, it is recognized that while this currency is a foreign currency, it has some of the attributes of a domestic currency**, because most domestic transactions are settled in this currency. Therefore, when compiling the sectoral balance sheets for the financial corporations sector in a dollarized economy, the financial assets and liabilities with resident counterparts denominated in the foreign currency that is a legal tender are **classified as being denominated in the domestic unit of account**. A distinction is made between positions in the foreign currency used as legal tender and positions in other foreign currencies, which should be classified as denominated in foreign currency.[3]

III. ESS Transactions

5. **Transactions to be recorded in the balance of payments are only those between residents and non-residents (i.e., domestic transactions settled in foreign-issued banknotes and coins should not be recorded in the balance of payments).**[4] However, in dollarized economies (and in economies with cocirculation), the identification of cross-border transactions and the distinction from domestic transactions may pose challenges. As opposed to economies that issue their own currency, all transactions in dollarized economies are conducted in foreign currency.

6. **While *BPM6* states that transactions between two resident institutional units in external assets are domestic transactions, it recognizes that the information available may not permit identification of the two parties to the transaction:**

a. "...Such transactions result in changes in structure of external asset positions and should be recorded in the international accounts as a reclassification of sectors of holding (i.e., in the other changes in financial assets and liabilities account). If both units fall in the same institutional sector, such reclassification entries cancel each other out and thus have no effect on sectoral positions." (*BPM6*, paragraph 3.7).

b. "…The information available … may not … permit identification of the two parties to the transaction … As a result, recorded international transactions may include not only those that involve assets and liabilities and take place between residents and nonresidents but also those that involve financial assets of economies and take place between two residents." (*BPM*6, paragraph 3.8). [5]

[3] See *Monetary and Financial Statistics Manual and Compilation Guide*, paragraph 4.206.

[4] Unlike in *BPM5*, which admitted the recording of balance of payments transactions for the exchange of transferable foreign financial assets between resident sectors (*BPM5*, paragraph 13, footnote 1).

[5] This is, transaction between residents in external financial assets.

7. **Balance of payment transactions settled in foreign-issued banknotes and coins should not be estimated based on changes of stocks.** Information may not be available for the identification of external transactions in foreign-issued banknotes and coins, making its compilation challenging particularly for the nonfinancial private sector. Compilers often estimate balance of payments transactions in currency and deposits of the financial sector based on changes in stocks (usually available from MFS) with exchange rate and price adjustments. While this estimation method is applicable for transactions in deposits with nonresidents, it is no longer valid for transactions in foreign-issued banknotes and coins, as holdings are significantly affected by domestic transactions.

8. **For the financial sector, information is usually available from MFS/balance sheet statements.** Significant external transactions are those relating to imports and exports of foreign-issued bills and coins by the central bank and commercial banks, which are usually reliably recorded.

9. **Information on government transactions in currency and deposits with nonresidents is usually available in government finance statistics questionnaires.** However, there is no split between currency and deposits, and additional information would be needed to ensure domestic transactions in foreign-issued banknotes[6] are not included as external transactions. It is not expected that the government has significant transactions with nonresidents in currency and deposits, as most transactions would be settled through government accounts at the central bank. Typical transactions of the government that could be directly settled with nonresidents (through deposits abroad or in cash) are those related to current expenses of embassies abroad or those related to fines and issuance of visas to nonresidents.[7]

10. **Even more difficult is to identify the cross-border transactions of the nonfinancial private sector.** For the nonfinancial private sector (including individuals), typical external transactions in foreign-issued banknotes include those related to remittances, travel, [8] informal and unrecorded trade (including illicit transactions), which are more difficult to capture in statistics.[9]

11. **Some countries where foreign currency is not legal tender—but it is used in some transactions or as store of value—produce estimates for balance of payments purposes.** Argentina estimates external transactions in banknotes and coins to compile external assets of nonfinancial corporations, households, and NPISHs using information on

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[6] Foreign issued coins are less material for statistical purposes.

[7] This information could be captured through specific questionnaires, if relevant.

[8] The People's Republic of China estimates travel settled by banknotes using a cash proportion survey on outbound and inbound travel, and data on individual's foreign cash withdrawals from and deposits in banks as a reference.

[9] See BOPCOM 18/10 on the work of the Task Force on the Informal Economy.

net imports of banknotes and coins, provided by Customs. This flow is adjusted by the: (i) net change in currency holdings of the Central Bank of Argentina; (ii) net change in currency holdings of commercial banks; and (iii) a percentage of inputs and outputs of expenditure of foreign tourists in the country and Argentinians abroad, respectively. The Russian Federation produces and disseminates estimates of transactions as well as positions in foreign currency cash for other sectors following an integrated approach.[10]

12. **Imports and exports of currency can be captured through the banking system**. Currency imported/exported directly by individuals is more difficult to estimate if not passing through the banking system. While data for foreign currency received and returned through banking channels are generally available and accurate, currency transported by individuals is only captured above specific thresholds via customs declarations.

IV. Estimation of the Foreign Currency in Circulation

13. **Foreign-issued banknotes in circulation in dollarized economies is an important component of currency and deposits in ESS and MFS.** Usually, it is difficult to estimate the amount of foreign currency bills in circulation in these economies; and few dollarized—or with extensive cocirculation—countries include foreign currency notes in their measure of broad money in MFS.

14. **Beyond the implications for the classification of financial assets and liabilities in the sectoral balance sheets of financial corporations, dollarization has consequences for the measurement of monetary aggregates in the economy.** Currency in circulation is no longer a liability of the national central bank, but a liability of a foreign monetary authority.[11] Therefore, it is not included in the calculation of monetary base and cannot be quantified from the accounting records of the national central bank. However, foreign currency circulating in a dollarized economy is part of the means of payments of that economy and should be included in the national definition of broad money.

15. **Foreign currency circulating in a dollarized economy is usually estimated in proportion to either domestic currency (in non-fully dollarized economies) or deposits.** Once a relationship is established between the holdings of foreign and domestic currency by the private sector, the circulation of foreign currency can be estimated as a proportion of the domestic currency issued by the national central bank.[12] This method is applicable only in economies where the domestic and foreign currency circulate in parallel, rather than in fully dollarized economies. For the latter, it can be used as a starting point to determine the amount

[10] See data table "Changes in Assets of Banks and Other Sectors in Foreign Currencies Held in Cash" and the accompanying methodological commentary.

[11] A small amount of domestic coins and old national banknotes might still circulate together with the foreign currency, but they are statistically less material.

[12] See, for example, Krueger and Ha (1995).

of foreign currency in circulation prior to the adoption of the foreign currency as legal tender. Another approach is to determine a preference function based on observed values for the holding of cash vis-à-vis deposits and, based on this relationship, estimate the holdings of foreign notes as a proportion of (transferable or total) deposits in the banking system.[13]

16. **Estimates of foreign currency in circulation should be periodically revisited and updated.** Experience has shown that maintaining the same original proportions can produce inconsistent results. Furthermore, the quality of the estimates will highly depend on the reliability of the source data. Estimates based on surveys risk low and/or misleading responses.

17. **From the point of view of the currency supplier, several studies have estimated the amount of US dollars circulating outside the economy and the amount of euros circulating outside the euro area, although not allocating them by country.**[14] The challenges faced by these estimations are similar to the ones described for the circulation of foreign currency in dollarized economies, including the measurement of cross-border movement of currency by individuals.[15]

V. Reserve Assets in Dollarized Economies

18. **The general criteria for reserve assets applies also to dollarized economies.** The purpose of reserve assets for meeting balance of payments financing needs and other related purposes (such as serving as basis for foreign borrowing) apply to dollarized economies. However, the need to hold reserves for the purpose of intervention in exchange markets to defend the domestic currency is not relevant for defining the reserve assets of fully dollarized economies:

a. "In the case of a dollarized economy, reserve assets shown in the balance of payments and IIP should meet the criteria described in Chapter 6, Functional Categories." (*BPM6* paragraph A3.29, footnote 7).

b. "For dollarized economies, the need to hold reserves for the purpose of intervention in exchange markets is not relevant for defining the reserve assets of these economies." (*BPM6* paragraph 6.64, footnote 4).[16]

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[13] See Vera (2007).

[14] See, for example, Judson (2017). The estimates indicate that around half of U.S. currency circulates abroad.

[15] Since generally travelers are required to declare only amounts of cash over U$S 10,000, any amount below that threshold is not captured in the statistics.

[16] See also *Guidelines for a Data Template* (or *RDT Guidelines*) paragraph 9, footnote 6, and paragraph 64, footnote 3.

VI. Specific Aspects Related to the Reporting of the Data Template on International Reserves and Foreign Currency Liquidity

19. **Information on foreign currency liquidity of a country is a key input for public and private decision making.** In this regard, the RDT provides a comprehensive account of countries' total foreign currency resources (including reserve assets and other foreign currency assets of the authorities) with its short-term predetermined and contingent net drains on such resources. The RDT is designed for use in diverse economies, including dollarized economies (*RDT Guidelines,* paragraph 40). It is recommended that country-specific exchange rate arrangements (such as the implementation of dollarization) be disclosed in country notes:

a. "To enhance the analytical usefulness of the data and to minimize the prospect that users will misinterpret information reported in the Reserves Data Template, it is recommended that country-specific exchange rate arrangements (such as … the implementation of dollarization) … be disclosed in country notes[17] accompanying the data, where appropriate. It would also be useful to disclose the major sources of funds for reserve assets and other foreign currency assets, which may include foreign currency earnings from exports, issuance of foreign currency bonds, and foreign currency deposits from domestic banks …" (*RDT Guidelines,* paragraph 42).

b. "… To enhance data transparency, it is also important to indicate in country notes specific changes in the reporting country's exchange rate arrangements (for example, the implementation of dollarization) and their impact on the level of the country's reserve assets." (*RDT Guidelines*, paragraph 58).

20. **A draft proposal of country notes for dollarized economies is included in Appendix I.**

21. **In dollarized economies, other foreign currency assets and predetermined and contingent net drains may play a more significant role than in other economies.** Because authorities' domestic claims and liabilities are in foreign currency, it is particularly important to identify these items and that they be properly recorded in the RDT for sound analysis. This paper elaborates on some particularities in various sections of the RDT and on items that could be relevant for dollarized economies.[18] In addition, given that the institutional coverage of the sections I. B, II, III and certain items of section IV of the RDT include central government (excluding social security funds) and the related positions and flows for central government can be significant in dollarized economies, this paper proposes to recommend

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[17] See also *The Guidelines* A5.5 item (8) in Appendix 5.

[18] The particularities would apply as well to economies with extensive cocirculation, unless otherwise indicated.

dollarized economies compiling separately (a) Monetary Authority and (b) Central Government excluding social security funds in the RDT.[19] The separate reporting provides a better assessment of risks, identifying to which sector pertain the other foreign currency assets as well as the predetermined and contingent net drains.

A. Other Foreign Currency Assets—Item I.B. of the RDT

22. **A key definitional difference between other foreign currency assets and official reserve assets is that other foreign currency assets can include positions with other residents** as long as they are denominated in convertible foreign currencies and available on demand to meet foreign currency needs of the authorities, as stated in paragraph 122 of the *RDT Guidelines.*

23. **In dollarized economies, given that the currency used as legal tender is a foreign currency, there could be significant holdings of securities issued by residents, deposits in resident banks, and working balances of the government:**

a. For holdings of securities issued by residents (for example, those issued by resident deposit taking corporations (DTCs) or the government), careful considerations should be made regarding the liquidity and availability on demand of such assets to include them under Item I.B. The *RDT Guidelines*, paragraph 89 states: "To be readily available … reserve assets generally should be of high quality (investment grade). If reserve assets include securities below investment grade, this must be indicated in country notes accompanying the data." This would apply as well to securities included in Item I.B.

b. Regarding "working balances abroad of government agencies available for immediate use" (*RDT Guidelines*, paragraph 125), this paper suggests clarifying that working balances of the central government may also include cash holdings in foreign currency, as they would as well be available for immediate use and could be relevant in dollarized economies.

[19] El Salvador and Ecuador are examples of dollarized economies reporting the RDT (the latter only on its national summary data page). Considerations regarding the RDT could also be applicable to partially dollarized economies.

B. Predetermined Short-Term Net Drains on Foreign Currency Assets (Nominal Value)—Section II of the RDT

24. **For dollarized economies, short term predetermined net drains include, among others:**

a. Any central bank financing received from/provided to domestic entities. On the liability side (outflows), this section would include all deposits held at the central bank by resident entities including those of the DTCs above regulatory reserves/liquidity requirements[20] and deposits of the government agencies and public enterprises.

b. All central government domestic and external debt (i.e., loans, securities, trade credits, and accounts payable).[21] This implies recording all related predetermined cash outflows of the central government, which requires information on a frequent and timely basis.[22]

25. **In dollarized economies, predetermined short term net drains would be nil for forwards, futures, and gold swaps**. This is because "only financial derivatives settled in foreign currency vis-à-vis domestic currency should be covered in item II.2 of the Reserves Data Template." (*RDT Guidelines*, paragraph 169)[23]

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[20] For DTCs' deposits in countries with regulatory reserves/liquidity requirements, only the deposits above such requirements are predetermined drains. Deposits held in the central bank in respect of regulatory reserves/liquidity requirements are included in section III of the RDT as contingent liabilities (*RDT Guidelines*, paragraph 197).

[21] "Accounts payable that are materially significant, including scheduled payments for goods and services previously purchased on credit by the authorities, payments of interest and principal in arrears, and wages and salaries outstanding (outflows of foreign currency)." (*RDT Guidelines*, 178)

[22] See consideration on information on public debt securities in the *RDT Guidelines*, paragraph 165.

[23] Same exclusion would apply for contingent short-term net drains related to short and long positions in options, (Item III.5 of the RDT) and memo items related to financial derivatives that have a residual maturity greater than one year (Item IV.(1)(f) of the RDT), as contracts to be included are in foreign currency vis-à-vis domestic currency (see *RDT Guidelines*, paragraph 272). These exclusions would not apply to economies with cocirculation, because contracts can be in foreign currency vis-à-vis domestic currency.

C. Contingent Short-Term Net Drains on Foreign Currency Assets (Nominal Value)—Section III of the RDT

26. **In dollarized economies contingent liabilities can be relevant because of the possible existence of**:

a. Any debt guaranteed by the authorities (both by the central bank and central government).[24]

b. Any domestic DTCs deposits in respect of the regulatory reserves/liquidity requirements.[25]

D. Memo Items—Section IV of the RDT

27. **In dollarized economies the following items can be relevant**:

a. Securities lent and on repo (whether or not recorded in Section I of the RDT along with associated liabilities in Section II).

b. Financial derivatives assets (net, marked to market) (Item IV.(1)(e) of the RDT).

28. **On the other hand, in dollarized economies, the following items may not be applicable:** domestic currency debt indexed to foreign exchange rates; financial instruments denominated in foreign currency and settled by other means (e.g., in domestic currency); and derivatives that have residual maturities longer than one year.[26]

Questions for the Committee:

1. *What are Committee members' views and experiences in estimating external transactions in banknotes and coins in dollarized economies?*

2. *What are Committee members' views and experiences in estimating foreign-issued banknotes and coins in circulation in dollarized economies?*

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[24] In principle, only contractual obligations of the authorities are included here. In practice, financial instruments issued with the support of government (public mandates) may also be covered, even though no explicit financial backing is provided by the authorities (*RDT Guidelines*, paragraph 191). Included are guarantees provided by the authorities backed by collateral, as well as other legal or contractual obligations of the authorities that are contingent on some future event or action. The criterion for reporting the contingent obligation in this item is that the authorities be "demonstrably committed" to meet the obligations when called upon to do so (*RDT Guidelines*, paragraph 196).

[25] See *RDT Guidelines*, paragraph 197.

[26] As contracts to be included are those in foreign currency vis-à-vis domestic currency (see *RDT Guidelines*, paragraph 272).

3. *What are Committee members' views on RDT related aspects, and in particular on:*

    a. *Specific information to be reported in the RDT country notes for dollarized economies?*

    b. *Particularities described for the various sections of the RDT and the items that could be relevant for dollarized economies?*

    c. *The suggestion to clarify that not only working balances abroad of the central government but also cash holdings in foreign currency should be included in Item I.B. of the RDT?*

    d. *The proposal to recommend dollarized economies to compile separately (a) Monetary Authority and (b) Central Government excluding social security funds in the RDT?*

4. *To close this item from the research agenda, does the Committee agree that this note be revised, if needed (incorporating any possible comments received), and published on the Committee's website?*

29. **This paper is a revised version of the paper presented during the Committee meeting and it incorporates Committee's comments received through written procedure.**

References

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Appendix I: Draft Proposal of Country Notes/Metadata for Dollarized Economies

The metadata questionnaire accompanying the RDT to be submitted to the IMF's Statistics Department includes specific questions that are relevant for dollarized economies. The below proposal accounts for the information already requested and proposes expanding it further.

1. In the section Other reporting issues:

    a. The Metadata question "Is there in place or have you recently changed to an economy/a country-specific exchange rate arrangement (such as the operation of a currency board or the adoption of full dollarization)?" could include the following comment: Starting on month/day/year, the US dollar (euro) has been adopted as the legal tender.

    b. The Metadata question "What are major sources of funds for reserve assets and other foreign currency assets (e.g., foreign currency earnings from exports, issuance of foreign currency bonds, and foreign currency deposits from domestic banks? Please explain in case of full dollarization)?" could include comments on the specific relevance of each of the main sources, with possible breakdown into: (i) exports; (ii) issuance of bonds (of which issued by central bank/government/other); and (iii) deposits from resident entities (of which DTCs/government/other).

2. In Section I.B. Other foreign currency assets, the following comments could be added: Major sources of funds for other foreign currency assets reported in Section 1B, with possible breakdown into:

    a. Authorities' investment in foreign currency securities issued by entities located in the reporting country (of which issued by resident DTCs/government/other). Specify if there are any securities below investment grade.

    b. Working balances of the central government (of which abroad/in cash) available for immediate use.

3. In the section on "Other information not included in the above", comments could include specifications on data availability and coverage of central government net predetermined and contingent short-term drains for RDT compilation, [27] including details on:

    a. Availability on a frequent and timely basis of information on predetermined/contingent outflows of the central government.

[27] Such comments could also be included in the section on General issues, institutions covered, or in any specific comment to items of Sections II and III, as applicable.

b. Any predetermined/contingent outflows not reported and the reasons why they are not reported (data unavailability versus amounts not materially significant).

c. Any relevant predetermined/contingent inflows of the central government.