Thirtieth Meeting of the
IMF Committee on Balance of Payments Statistics

Paris, France
October 24–26, 2017

BOPCOM—17/10

Recording of Central Bank Swap Arrangements in Macroeconomic Statistics
BOPCOM Written Consultation Comments

Prepared by the Statistics Department

INTERNATIONAL MONETARY FUND

Recording of Central Bank Swap Arrangements in Macroeconomic Statistics

BOPCOM Written Consultation Comments[1]

The 2016 meeting of the IMF Committee on Balance of Payments Statistics (BOPCOM) had identified for follow up action, the treatment of currency swaps agreements between central banks (see paragraph 78 of the Summary of Discussion). The increasing importance of these arrangements underscored the need for uniformity of statistical treatment. Accordingly, STA staff, in consultation with other IMF Departments, have drafted the document on *Recording of Central Bank Swap Arrangements in Macroeconomic Statistics* which was sent for comments to BOPCOM members, through a process of written consultation. Table 1 below presents the detailed comments received from BOPCOM members and STA feedback on them, including the proposed changes to the draft resulting from the consultation.

The original draft sent for consultation is shown in Annex 1.

Question to the Committee

- *Do Committee members agree with the proposed changes to the document emerging from the written consultation and included in the attached table?*

If Committee members agree with the proposed changes, the document will be revised accordingly and send for comments to the ISWGNA/AEG and to the GFSAC; subject to overall agreement, thereafter the clarification paper will be posted on the BOPCOM website.

[1] Prepared by Jose Cartas (Financial Institutions Division) and Marcelo Dinenzon (Balance of Payments Division), STA.

Table 1. Recording of Central Bank Swap Arrangements in Macroeconomic Statistics
BOPCOM – Written consultation

BOPCOM Member	Comments	STA Feedback
Ales Capek (Eurostat)	Both options of the statistical treatment recommended in the document, exchange of deposits with maintenance of value and exchange of deposits with a simultaneous forward contract are aligned to the recommendations of BPM6 regarding central bank swap arrangements (BPM6 paragraph 6.102).	OK.
	The document could mention whether currency swaps (exchanges of deposits) with characteristics similar to those of currency swaps between central banks exist also between other financial institutions, and if so what would be the recommended statistical treatment.	The document focuses on a type of arrangement called swap (central bank swap arrangements) but not meeting the definition of market-compliant currency swap contracts (see *BPM6*, paragraph 5.91). As mentioned in the paper, market currency swaps between other financial institutions should be treated as financial derivatives.
Philip Wooldridge (BIS)	Agreement with the treatment of central bank swap lines in BOP and other international statistics as an exchange of deposits. Suggestions for adding clarity to the options presented in the paper:	OK.
	Options A and B are both acceptable. However, paragraph 12 seems to suggest that option A is the "recommended approach". The note should be clearer about whether one option is preferred.	Revised version clarifies that option A is preferred for off-market swaps, while option B is recommended for "standard" FX swaps.
	The suggested options assume that the swaps do not have the characteristics of derivatives based on prevailing market prices. What is the recommended treatment if their market value is zero at	

BOPCOM Member	Comments	STA Feedback
	inception? Is option A preferred for off-market swaps and option B for "standard" FX swaps?	
	The paper could mention that a disadvantage of option A is that the obligation to unwind the swap is not recognised on the balance sheet. Option B records the derivative and in this way recognises the obligation. Quadruple recording explicitly recognises the obligation but, as the note states, results in double counting.	In terms of recognizing the obligation to unwind the operation, there is no much difference between the deposit liability of Option A, and the obligation created by fixed-term deposits (they must be unwound at maturity). In this sense, in our view there is not such disadvantage of Option A.
	Is option B the same as the usual method for recording derivatives? Paragraph 15 seems to suggest that it is, but the option is referred to as an exchange of deposits, which suggests that it is different from the usual method.	Option B is the usual method for recording swap contracts. The recording distinguishes between the buying/ selling of currencies (here, exchange of deposits) and the transaction in a financial derivative created by the forward contract. At inception, the parties exchange the underlying financial instruments (usually classified under other investment) and record an asset/liability equivalent to the market value of the forward contract (zero, if it was properly priced). During the life of the contract, the value of the financial derivative may change due to changes in exchange rates, interest rates, and the lapse of time. At the time of settlement, the difference in the values, as measured in the unit of account at the prevailing exchange rate, of the currencies swapped are

BOPCOM Member	Comments	STA Feedback
		allocated to a transaction in a financial derivative, with the values swapped recorded in the relevant other item (usually other investment). (*BPM6*, paragraph 5.92)
	Paragraph 18 about credit lines could be expanded to recognise that the undrawn portion of the swap can be considered a contingent asset, as is mentioned in paragraph 9.	Comment addressed in revised version of paragraph 18.
	The box about the treatment of IMF credit is interesting but does not explain why IMF credit is treated differently (beyond attributing the different treatment to “convention”).	IMF stand-by arrangements are actually loans disguised as the buying/selling of currencies with the commitment to reverse the operation at maturity. This IMF credit is a “one-way” transaction with a predetermined debt-service payment schedule—where the IMF does not use the currency of the member. Central bank swap arrangements discussed in this paper may grant fund access to both parties of the transaction. The use of funds should be eventually replenished before the transaction is settled. The text was revised accordingly.
	In addition to the comparison with IMF credit, another relevant comparison is with the treatment of repos. BPM6 is clear about the different treatment of swaps and repos (6.102 vs 6.103), but economically it’s not obvious why cash collateral should be treated differently from securities collateral. The treatment of IMF credit is similar to repos so these parts could be discussed together.	Repos are different to these swaps because they require the delivery of securities issued by third parties. The securities used as collateral are negotiable and can be on-sold by the cash-giver. The deposit in domestic currency constituted at the requesting central bank is nonnegotiable

BOPCOM Member	Comments	STA Feedback
		and it does not eliminate the counterpart risk of the operation.
	The reference to MFSMCG in paragraph 1 could be changed to MFSMCG 2016 to clarify the version that is being referenced.	There is no *MFSMCG 2016*, just *MFSMCG*.
Caroline Willeke (ECB)	Option B provides a fair reflection of the net value of the swap at each point in time. On the contrary Option A always delivers by construction a net value of zero, irrespective of the developments in spot rates and interest rates during the life of the agreement.	The deposit issued by CBA and held by CBB is a foreign liability of CBA denominated in domestic currency, but fully linked to a foreign currency in Option A (also including any interest payment). The constant zero value for the contract is due to the accruing of interest and the indexation to the foreign currency at the spot exchange rate on the reporting date.
	A net value of zero would not reflect economic reality for swaps of currencies with different interest rates. To deliver zero net value, option A requires the recording of valuation adjustments (exchange rate related?) to liabilities denominated in domestic currency. This departs from established statistical standards.	The deposit is denominated in domestic currency, but fully linked to a foreign currency (because the central bank initiating the arrangement has an obligation to buy-back the foreign currency at the agreed exchange rate paying the spot exchange rate prevailing on the delivery date). Therefore, this account should be treated as being denominated in that foreign currency (*BPM6*, para. 3.101). The treatment is in line with statistical standards.
	As a consequence, **we support Option B**. This treatment also aligns with that of standard swaps and is better supported by	Revised version clarifies that option A is preferred for off-market swaps and option B for "standard" FX swaps. It seems that

BOPCOM Member	**Comments**	**STA Feedback**
	accounting data. At the same time, we also see option A as an acceptable alternative when the agreement is out of the market (agreed forward exchange rate very different from the market forward rate) and/or there are difficulties to properly value the embedded financial derivative.	in many cases central banks do not record this transaction as financial derivatives, but as an exchange of deposits (see comments from other members, including China, P.R.).
	We agree on the further distribution of the paper, but please also consider the following requests: • Option A and B should be presented on equal footing for the various fora to express their preference	Revised version clarifies that option A is preferred for off-market swaps and option B for "standard" FX swaps.
	• Annex 2 should also present the recording under option B	Included in revised version.
	• A number of improvements are needed in Annex 2 for the sake of clarity, e.g.: indicate the agreed forward rate, clearly separate stocks and flows (and being exhaustive in their recording), being consistent in the recording of valuation adjustments.	Included in revised version.
	• Para 6: we believe it is uncommon that the commitment to unwind the operation in a future date is at the spot rate of the original transaction.	We are aware of NCB swaps with this characteristic.
	• Para 8 starts with "Different type of swaps arrangements…", however we believe that it should rather read "Swaps with different purposes…".	Included in revised version.
	• Para 27*:" If the use of the funds is subject to any authorization…….";* we believe that it is rarely the case that the use of the funds is subject to authorization.	This applies to many NCB swaps we are aware of.

BOPCOM Member	Comments	STA Feedback
Miyuki Izumiyama (Japan)	Japan agrees that central bank currency swap transactions should be recorded as an exchange of deposits. However, if practical burden is taken account, the members should be granted a choice of recording with/without maintenance of value, when it comes to a valuation of deposit (liability) in domestic currency.	The guidance on maintenance of value is because the central bank initiating the arrangement has an obligation to buy-back the foreign currency at the agreed exchange rate paying the spot exchange rate prevailing on the delivery date. For macroeconomic statistical reporting, these are accounts denominated in foreign currency.
	There is no objection to invite comments from ISWGNA/AEG and so on. However, it would be desirable to add more detailed clarification on each example of the dates described by the Annex 2, in order to facilitate better understanding on the recommendations. Furthermore, there is no objection either, on thereafter posting a clarification paper on the BOPCOM website, subject to overall agreement.	Clarification included in revised version.
Paul Farello (BEA-US)	The proposed treatment, Option A, is conceptually sound and practical. Agreement to send the note for comments to the ISWGNA/AEG and to the GFSAC, and subject to overall agreement, thereafter post a clarification paper on the BOPCOM website.	OK.
Pim Claassen (DNB-The Netherlands)	We share your opinion that these central bank swaps generally do not have the characteristics of a standard currency swap. Therefore, we believe that recording under option A is the most appropriate one. However, if central bank swaps are similar to market swaps, we are in favor of recording them under financial	Revised version clarifies that option A is preferred for off-market swaps and option B for “standard” FX swaps.

BOPCOM Member	Comments	STA Feedback
	derivatives like standard currency swaps. Recording under option A or B should depend on specific characteristics, with option A as the most appropriate in most cases.	
	Support to the ECB recommendations, especially regarding improvements for Annex 2.	Included in revised version.
Consuelo Soto (Peru)	Agreement that this particular swap should be treated as an exchange of deposits in foreign exchange between the central banks involved. In this case, there is not a financial instrument linked to other specific instrument or indicator or commodity, the deposits are in themselves specific instruments that have to be recorded directly in the institution accounts.	OK. The accounts are denominated in local currency, but because they are indexed to a foreign currency for statistical reporting they are denominated in foreign currency, as recommended by *SNA2008/BPM6*.
Ivo Havinga (UNSD)	UNSD has no further comments on this well written paper and agrees with the proposed questions to the Committee.	OK
Han Jian (SAFE, China)	Since the Central Bank Swap Arrangements is different from the ordinary swaps, I agree to the Option A, that is, to record it as an exchange of deposits with maintenance of value, which is closer to the present practice of central bank.	OK
	Agreement on sending the paper for comments to the ISWGNA/AEG and GFSAC, and subject to overall agreement, then post a clarification paper on BOPCOM website.	OK
Robert Pupynin (Bank of Russia)	No objections to the proposed approaches.	OK
	Preference for presenting numerical examples of the different options.	Option A and B included in revised version.

BOPCOM Member	Comments	STA Feedback
	Clarify the description of the quadruple recording (more detailed description).	Revised paragraph 19 in new version.
Rosabel Guerrero (BSP, Philippines)	Currently, the Philippines has three existing swap arrangements aimed to address potential and actual BOP and short-term liquidity difficulties in the region. Under the Chiang Mai Initiative (CMI), the ASEAN Swap Arrangement (ASA) allows member banks from Indonesia, Malaysia, Philippines, Thailand, and Singapore to swap their local currencies with major international currencies for an amount up to twice their committed amount under the facility. The Chiang Mai Initiative Multilateralization (CMIM), which evolved from the CMI, was designed to enhance the effectiveness of the CMI by establishing an advanced framework of the CMI as regional liquidity support arrangement. The CMIM is a multilateral arrangement among the finance ministries and central banks of the ASEAN+3 member countries and the HKMA which is governed by a single contractual agreement with the objective of providing financial support in U.S. dollars through currency swap transactions among them. The ASA has remained in effect even with the operationalization of the CMIM. A bilateral swap agreement (BSA) was also entered into by the BSP and Bank of Japan to support the sustained partnership between the Philippines and Japan. To date, the BSP has not activated any of the above-mentioned swap arrangements. Thus, no swap transaction has been recorded in the country's external sector statistics by far. Nonetheless, should the BSP find the need to activate any of the available swap arrangement, the recording of data in the external sector statistics will be as recommended in Option A of the	OK

BOPCOM Member	Comments	STA Feedback
	proposed recording of central bank swap arrangements in macroeconomic statistics. Furthermore, we agree with the recommendation that the central bank currency swap transaction should be recorded as an exchange of deposits with maintenance of value. We likewise agree on sending the notes for comments to the ISWGNA/AEG and to the GFSAC, and thereafter posting a clarification paper on BOPCOM website.	
Ursula Schipper (Bundesbank)	For Germany / the ESCB this issue has been particularly relevant in the years immediately following the GFC. Back then, the recording of these transactions was intensively discussed within the ESCB (in the WG-ES) resulting in a recording convention equivalent to option B in the IMF paper. From a conceptual point of view, however, we were hesitant to follow that proposal as it did not seem sensible to record market values for implicit derivatives that derive from swap contracts that usually are neither conducted at market rates nor, if only because of their size, actually or intended to be marketable. Furthermore, as central bank data are of particular interest to the public, the respective disclosure of data under the “derivatives” item may provide a false image of a central bank’s actual business activities (e.g., when it does not enter into derivative contracts otherwise). We therefore studied the other approaches explained in the note. For a final recommendation, however, it would be necessary to have some further information on these.	OK

BOPCOM Member	Comments	STA Feedback
	Regarding the "maintenance of value"-approach: it would be helpful, if annex A would more clearly separate stocks and flow data (bop as well as other changes). In addition, an exposition of its impact on the reserve assets and the template would be appreciated. Furthermore, the accounting entries for the liability side of this approach (§ 13) seem counter-intuitive and difficult to implement in practice. That this approach is really easier to implement in practice than option B (see § 22) may therefore be questioned. Furthermore, option A may deviate from a central bank´s general accounting rules thereby creating asymmetries between both sets of data.	Clarification included in revised version. It is not clear why linking the deposit to the foreign currency is counter-intuitive, given that the central bank initiating the arrangement has an obligation to buy-back the foreign currency at the agreed exchange rate paying the spot exchange rate prevailing on the delivery date.
	We also see a need to explain in more detail, why the quadruple entry approach is not recommended (by numerical example as well?). The netting out of the additional asset / liability positions seems less complex and therefore error prone than the calculations necessary to implement the recommended approach (i.e., option A). The fact that two statistical transactions need to be recorded for a single “real” operation does not seem to be a huge disadvantage. As a “side effect” the quadruple entry would also provide a reserve-related liability (in foreign currency) for calculating the NIR appropriately.	The main disadvantage of the quadruple recording is that it does not reflect the true nature of the operation, since there are not two loan transactions guaranteed by a deposit, but just one central bank requesting the currency of the counterpart central bank. Additionally, it double counts external assets and liabilities of the involved central banks (i.e., their external debt as well as their external assets). To correct this, from a statistical perspective, it would be necessary to net out the additional assets in domestic currency with the additional liabilities in foreign currency, with the difference added to the liability deposit account in domestic currency (paragraph 20).

BOPCOM Member	Comments	STA Feedback
		The deposit in domestic currency—fully linked to a foreign currency—is actually a reserve-related liability in foreign currency.
	In summary, before sending the note for comments and for achieving an overall agreement to / with other fora, we suggest that the different recording options be all presented more comprehensively (with numerical examples?) and with a list briefly stating their respective drawbacks and advantages (therefore also indicating which approach may best be applicable for which swap) and discuss them again within the BOPCOM.	The paper presents the different recording options and their advantages and drawbacks with a view to recommending the preferred treatment.
	In addition, the IMF may the recommend a “default” approach (to be used e.g. when the CBs involved cannot agreed upon one of the other approaches).	The revised clarification note actually presents the recommended treatment, namely option A is preferred for off-market swaps, while option B, for “standard” FX swaps.
Francois Mouriaux (Banque de France)	While we see the merits of option A as regards simplicity, we wonder somewhat whether it would fully reflect the overall currency position, in particular in the recording of the IIP. A possible alternative for mitigating this potential drawback could be perhaps to account for both legs (spot and term) of the transaction at the same value for the sake of simplicity.	The liability deposits are indexed to the foreign currency (maintenance of value), therefore they do reflect the overall currency position.

Annex I

Recording of Central Bank Swap Arrangements in Macroeconomic Statistics

1. **In the past few years, several central banks have entered reciprocal currency arrangements through the temporary exchange of deposits.** The exchange provides one or both of the central banks that are part of the contract with assets that can be used to meet the economy's balance of payments financing needs and/or to provide local markets with foreign exchange liquidity. Because these arrangements are not a standard currency swap operation,[2] they warrant mention in the *BPM6* (paras. 6.102–6.104) and the *MFSMCG* (para. 4.175).

2. **This note discusses possible options to record central bank swaps and recommends the preferred treatment of these arrangements in macroeconomic statistics, based on past statistical guidance and central banks' accounting practices.**[3] The annex presents examples of the recording in monetary and balance of payments statistics of the recommended option presented in this note.

Standard Currency Swap

3. **A foreign currency swap is a spot sale/purchase of currencies and a simultaneous forward purchase/sale of the same currencies** (*MFSMCG*, para. 4.171). In the case of a standard currency swap, the recommendation is to record the spot sale of the currencies and, simultaneously, record a forward contract (derivative) at its market value.

4. **If the forward contract is correctly priced based on the spot rate of the currencies and the interest rates in their respective economies, its value at inception will be zero.**[4] For example, if Bank A enters in a swap with Bank B to exchange 1,000,000 units of currency A against 1,200,000 units of currency B (spot exchange rate 1.0:1.2), with the commitment to revert the operation in one year, and the interest rates in countries A and B are 3 percent and 5 percent p.a., respectively, the forward exchange rate should be—according to the uncovered interest rate parity—**1.0:1.2233**.

5. **Over the contract's life, as time lapses, spot exchange rates fluctuate, and interest rates change, the value of the forward contract can be positive (asset) or negative (liability) to the parties involved.** If after six months the spot exchange rate and

---

[2] They do not usually follow standard market conditions (e.g., exchange rates and market interest rates prevailing in the respective economies)

[3] The accounting treatment of these transactions in some central banks may differ from the statistical treatment that is being recommended in this note.

[4] The uncovered interest rate parity states that the forward rate in such contracts is set according to the formula Forward rate = Spot rate$*(1 + r_n)^t/(1+r_f)^t$, where r_n and r_f are the domestic and foreign interest rates, and t is time.

the interest rates remain unchanged, the value of this forward contract will be a liability of 9,520 (in currency A) for Bank A and a corresponding asset of 11,424 for Bank B (in currency B), reflecting the shorter discount time for the future cash flows.[5]

Central Bank Currency Swaps

6. **Swap arrangements between central banks do not fully conform to a standard currency swap between market participants.** Here, one central bank exchanges a certain amount of its currency with the partner central bank for the other country's currency at the spot exchange rate, with the commitment to unwind the operation on a future date, at an agreed exchange rate (normally, the spot rate of the date of the original transaction). The foreign currency so acquired is usually held in an account at the partner central bank. Depending on the contract, one central bank may pay an interest to the other central bank on the amount of foreign currency used under the general swap arrangement. Also, margin calls may be required to account for exchange rate fluctuations, which are to be credited to the partner's deposit account if certain thresholds are crossed or at certain frequency.

7. **The *BPM6* (para. 6.102) and the *MFSMCG* (para. 4.175) describe such arrangements as an exchange of deposits (in foreign exchange) between the partner central banks.** The funds received can be considered as reserve assets, if they meet the general criteria of being denominated and settled in convertible foreign currencies, being readily available to and controlled by monetary authorities in the most unconditional form, etc. (*BPM6*, paras. 6.64–6.75). if the criteria are not met (e.g., if the use of the funds is subject to any authorization by the counterpart central bank), the funds would not conform to the definition of reserve assets and the deposit should be recorded as "other investment" in external sector statistics.

8. **Different types of swap arrangements were conducted between central banks.** For example, the U.S. Federal Reserve has entered into agreements to establish dollar and foreign-currency liquidity swap lines with the European Central Bank (ECB) and a number of other foreign central banks (see https://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm). The People's Bank of China (PBC) has also entered in currency swap arrangements with other economies' central banks, in some cases to provide those central banks with foreign assets that can be used to meet balance of payment financing needs, to contribute to the internationalization of

---

[5] The formula for calculating the value of a forward contract at a point of time during its life is

Fair Value = $FC*[F*(1+r_n)^{-t} – S*(1+r_f)^{-t}]$, where FC is the notional value of the forward contract, F the agreed forward exchange rate, and S the spot exchange rate at the time the contract is valued. In our example, for CBA this results in $1,223,301* [0.81746*(1+.03)^{-0.5} – 0.83333*(1+0.5)^{-0.5}] = -9,520$A;

0.81746 and 0.83333 are the forward and spot exchange rate of currency B expressed in units of currency A, and t = 0.5 because the contract is being valued at mid-term of its maturity.

the Renminbi and/or to facilitate trade with those economies. Other central banks have also entered into similar agreements.

9. **No transaction should be recorded until the money is put at the disposal of the respective central banks.**[6] Normally, central bank currency swaps take place under an umbrella/master agreement**.** Individual swap transactions are carried out for a fraction of the amount agreed in the master swap agreement, but the total principal amount outstanding cannot exceed in aggregate the maximum agreed in the master swap agreement. For accounting and statistical purposes, only the individual swap transactions should be recorded, since the remaining amount until the ceiling of the master agreement is contingent upon the parties, and therefore outside the financial asset boundary. In other words, until the money is disbursed the swap is to be considered as a contingent asset (i.e., like an undrawn line of credit or a guarantee) and no financial asset should be recognized (*BPM6*, para. 5.10).

Recommended Treatment

10. **In line with the *BPM6* and the *MFSMCG*, this note recommends recording the currency swap transactions as an exchange of deposits, since central bank swaps do not have the characteristics of a standard currency swap.** Generally, the forward exchange rate is not priced based on the market interest rates prevailing in the economies entering in the contract.[7] Additionally, an interest is usually charged on the used portion of the deposit. The proposed treatment, described as *Option A*, involves the recording of the exchange of currencies with the commitment to unwind the operation on a future date at an agreed exchange rate.

11. **Some central banks have recorded these currency swaps as a financial derivative, with the exchange of deposits as a spot operation and simultaneously entering in a forward contract.** This approach (*Option B*) is also acceptable, since it properly records external assets and liabilities involved in the transaction. However, the forward contract should be properly priced based on the market interest rates prevailing in the economies, and considering any interest charge on the used funds, which may not be easy to apply symmetrically in practice.

Option A – Exchange of Deposits with Maintenance of Value

---

[6] As mentioned in paragraph 7, to be considered as reserve assets the funds must be readily available to and controlled by monetary authorities in the most unconditional form, i.e. the use of the funds should not be subject to any authorization by the counterpart central bank.

[7] In principle, if the conditions of the contract included an element of grant or concession, an adjustment should be made such that the transactions be recorded at market prices and the difference between the actual and the market price should be recorded as a transfer (*BPM6*, para. 3.79). However, it should be noted that, for instance, for loans with concessional loans, the means of incorporating the impact within the SNA and international accounts have not fully evolved. Accordingly, information on concessional debt could be provided through supplementary information (*BPM6*, para. 12.51).

12. **Under the recommended approach, the transaction will be treated as an exchange of deposits between the central banks, with the obligation to unwind the operation at a fixed exchange rate on a specified date.** Under this option, the deposit of central bank A (CBA) held with the counterpart central bank B (CBB) is a foreign asset of CBA, denominated in foreign currency and part of its international reserves if they meet the general criteria for being reserve assets. A similar treatment would be applied to the deposits of CBB held with CBA, as relevant.

13. **The deposit issued by CBA and held by CBB is a foreign liability of CBA denominated in domestic currency, but fully linked to a foreign currency.** This is so, because CBA has an obligation to buy-back the foreign currency at the agreed exchange rate paying the spot exchange rate prevailing on the delivery date. Therefore, this account should be treated as being denominated in that foreign currency (*BPM6*, para. 3.101). To accomplish this, periodic revaluation adjustments on the CBB's deposit account should be carried out to ensure the appropriate recording of the actual outstanding amount that is owed—the amount of foreign currency to be reimbursed in the simultaneous forward transaction at the end of the arrangement, including any interest payment. A similar recording will take place at CBB.

14. When a counterpart central bank (say, CBB) withdraws funds from the deposit account, there will be a decrease in the external liabilities (deposits) of CBA, which will then not fully reflect its obligation to repurchase the full amount in national currency of the original operation delivering foreign currency. However, CBB will need to replenish its deposit account with CBA before the contract is unwound.

Option B – Exchange of Deposits with a Simultaneous Forward Contract

15. **A second option is to treat the currency swap arrangement as a standard currency swap**, namely the purchase of foreign currency with local currency, and the simultaneous recognition of a forward contract for the obligation to unwind the operation at a certain date. The value of the forward will be determined by the agreed forward rate and the discounted spot exchange rate using the market interest rates in both economies, including any interest charges to be paid when the central banks use the balances of their deposit accounts.

16. **When the transaction is initiated, it will be recorded as an increase in assets/deposits (in foreign currency) of each central bank with the counterpart central bank, with the corresponding offsetting entries in liabilities, denominated in domestic currency. The arrangement will also involve the recording of a financial derivative (asset or liability), once the forward contract has some market value.**[8] The balances of the deposit accounts reflect the initial deposit *less* any withdrawal, and no maintenance of

[8] The financial derivative should be recorded in external statistics as any other financial derivative contract.

value is needed for the liability deposit account denominated in national currency. The financial derivative should be periodically revalued to reflect market conditions, and will be an asset or liability of the counterpart central banks, depending on spot exchange rate, interest rate, and time to maturity.

17. **The liability deposit will reflect maintenance of value if the derivative contract is periodically settled through margin payments.** This is particularly important for the appropriate recording of the external debt of the central bank requesting the funds.

<u>Other (not recommended) Options</u>

Credit Line Facility

Use of Fund Credit

The use of Fund Credit could be interpreted to be similar to a central bank currency swap. However, by convention, a different treatment is followed:

"The provision of financial assistance by the IMF to its members through the General Resources Account (GRA) is not "lending" either technically or legally. IMF financial assistance provided through the GRA takes place by means of an exchange of monetary assets, similar to a swap. Nevertheless, this purchase and repurchase of currencies from the IMF, with interest charged on outstanding purchases, is functionally equivalent to a loan and its subsequent repayment." (International Monetary Fund, *IMF Financial Operations, 2015*, footnote 5, page 4)

In balance of payments statistics, use of fund credit (UFC) is classified in the category loans, whereas the sale of domestic currency to the *IMF Nº 1 Account* is not shown as a balance of payments transaction or in the international investment position (*BPM6*, paras. 5.51 and 7.79). In monetary statistics, the central bank's sectoral balance sheet includes purchases of the Fund's resources in exchange for domestic currency in the *IMF Nº Account*, which also records the payment of the domestic currency component of the IMF quota subscription (*MFSMCG*, para. 4.245). However, the central bank survey is presented on an analytical net basis, showing the *Reserve position in the Fund* as a reserve asset and the UFC as a loan liability, excluding in this presentation the balance of the *IMF Nº 1 Account*.

18. **The economic nature of the umbrella agreement of currency swap arrangements might resemble the opening of a credit line facility.** When one central bank requests the drawing of funds through a swap transaction, the counterpart central bank might record the provision of currency as a loan to the other central bank, which is collateralized by a deposit account of the former opened at the latter. To avoid double counting of external assets and liabilities, this approach would require recording one of the exchanged deposits off-balance sheet, which is contrary to central banks accounting practices, and therefore not recommended. The recording of the deposits in the IIP (*RDT Guide* A7.27) would not be reflected, either.

Quadruple Recording of Exchange of Deposits

19. **The recording of central bank currency swaps through a quadruple entry is not recommended.** This treatment has been observed in the praxis, with central banks recording the swap as two pairs of asset and liability entries. Each central bank will record a foreign asset in domestic currency for the amount of the exchanged funds, and as a contra-entry a foreign liability also in domestic currency for the deposit account opened to deliver the funds. The mirror transactions will be a foreign liability (loan from the other central bank) and a foreign asset (deposit placed with the other central bank), in both cases in foreign currency.

20. This approach splits into two transactions what is actually a single operation. Additionally, it double counts external assets and liabilities of the involved central banks (i.e., their external debt as well as their external assets). To correct this, it is necessary to net out the additional assets in domestic currency with the additional liabilities in foreign currency, with the difference added to the liability deposit account in domestic currency.

Summary

21. **This note recommends the statistical treatment of central bank currency swap transactions as the exchange of deposits between central banks, with the obligation to unwind the operation at a fixed exchange rate on a specified date (option A).** Following this approach, each central bank acquires a foreign asset in foreign currency, and creates a foreign liability in domestic currency. Since the liability deposit account in domestic currency is fully indexed to a foreign currency, a valuation adjustment account linked to the former should be created and its carrying balance periodically adjusted to reflect the total amount of domestic currency needed to buy the foreign currency to be delivered, including any interest payment.

22. The advantages of the recommended approach are that it does not imply any duplication of assets/liabilities nor any off-balance sheet recording. Additionally, it may be easier to apply in practice than option B (see below).

23. **If the central banks assimilate the transaction to a standard currency swap (Option B), then it is acceptable to record the swap as an exchange of deposits (foreign assets and liabilities) between central banks, with the simultaneous creation of a financial derivative for the forward contract implicit in the operation.** Both central banks will have an asset in foreign currency and a liability in domestic currency for the exchanged deposits, and a financial derivative whose value (asset or liability) will fluctuate depending on the spot exchange rate, interest rates agreed for the use of funds, prevailing market interest rates, and time to maturity at the moment of valuation. As in Option A, but especially important for this treatment, a symmetric recording should be performed by both central banks. To implement this option, both central banks should properly estimate the value of the

financial derivative based on exchange rates and interest rates in both economies, which may be difficult to apply symmetrically in practice.

24. **The quadruple-entry recording in the accounting balance sheet of central banks is not recommended.** This treatment should be discouraged, since it double-counts external assets and liabilities of each counterpart. In this case, a netting out of the additional accounts is required.

Questions to BOPCOM members

25. **Against this background, the views of the Balance of Payments Committee are sought on the following questions:**

- *Do Committee members agree that central bank currency swap transactions should be recorded as an exchange of deposits with maintenance of value, as recommended in this note?*

- *Do Committee members agree to send the note for comments to the ISWGNA/AEG and to the GFSAC, and subject to overall agreement, thereafter post a clarification paper on the BOPCOM website?*

Annex I. Implications of the Proposed Solution for Fund Programs

26. The net international reserves (NIR) is among the variables included in the performance criteria and indicative targets set out in Fund programs. Operationally, the NIR is the difference between the country's gross reserve assets and its reserves-related liabilities. The note recommends treating central bank currency swap transactions as an exchange of deposits between two parties, with the obligation to unwind the operation at a fixed exchange rate on a specified date. As noted below, implementation of a central bank currency swap will increase the gross international reserves, but not the NIR.[9]

27. Under the proposed treatment, **deposits (in foreign exchange) acquired by the central bank initiating the arrangement can be treated as reserve assets if they meet the general criteria** of being denominated and settled in convertible foreign currencies, being readily available to and controlled by monetary authorities in the most unconditional form, etc. (*BPM6*, paras. 6.64–6.75). If the use of the funds is subject to any authorization by the counterpart central bank, the funds would not conform to the definition of reserve assets.

28. **Deposit liabilities arising from foreign currency swaps with other central banks are reserve-related liabilities.**[10] Reserve-related liabilities are defined as foreign currency liabilities of the monetary authorities that can be considered as direct claims by nonresidents on the reserve assets of an economy (*BPM6*, paras. 6.115–6.116).

29. **The related liability would usually be recorded as exceptional financing (below the line).** In the analytic presentation of the balance of payments, the foreign deposit liability denominated in domestic currency but fully linked to a foreign currency would be shown below the line, because the main motivation of the transaction is to provide those central banks with foreign assets that can be used to meet balance of payments financing needs. This is consistent with the standard definition of NIR used in Fund programs.

30. Regarding the maturity of the liability, **individual swap transactions are usually short-term transactions.**[11] They are normally carried out for a fraction of the maximum amount agreed in the umbrella contract. For accounting and statistical purposes, only the money disbursed (i.e., not the maximum amount of the contract) should be recorded. Until then, the agreement is to be considered as a contingent asset (like a credit line) (i.e., outside the financial asset boundary). In other words, no transaction should be recorded until the money is put at the disposal of the respective central banks.

---

[9] This conclusion is equally applicable to both the preferred option (exchange of deposits) as well as to the other acceptable option (spot sale of currencies plus financial derivative)

[10] Of course, subject to the related assets conforming to the definition of reserve assets.

[11] In which case, the liability should be recorded as predetermined short-term drains on reserves in the Data Template on International Reserves and Foreign Currency Liquidity (http://www.imf.org/external/np/sta/ir/IRProcessWeb/index.aspx)

Annex II. Numerical Examples for Recording Central Bank Currency Swaps

This annex provides numerical examples on the way to record central bank currency swaps, according to the recommended approach described in the note.

On **November 30, 2016**, Central Bank A (CBA) and Central Bank B (CBB) sign an agreement to establish a bilateral currency swap arrangement for up to $A 10 billion. Under this agreement, one central bank (the "requesting" party) can request from the other central bank (the "providing" party) to purchase a certain amount of the other country's currency in exchange for its own currency, with the commitment to repurchase its own currency with the other country's currency at a future date. The total amount drawn through successive requests cannot exceed $A 10 billion. The currencies will be credited in a non-interest bearing deposit account of the counterpart central bank at the other central bank. Interest must be paid on any amount withdrawn from these accounts, based on the market interest rate of the country's used currency (to be paid at maturity).

On **January 2, 2017:** CBB requests from CBA to buy $A 1 billion in exchange of $B 1.2 billion (spot exchange rate: $A 1.00 = $B 1.20), with a commitment to unwind the transaction on December 31, 2017. Interest rates in country A and country B are 5 percent and 10 percent p.a., respectively, and do not change during the year.

On **March 31, 2017:** the currency of country B devalues to $A 1.00 = $B 1.40. Exchange rates do not change until the end of the year.

On **June 30, 2017:** CBB transfers $A 500 million from its account at CBA to a current account in euros at its correspondent bank in Frankfurt. To pay for the transaction, CBA transfers the amount from its current account at the same bank.

On **September 30, 2017:** CBA uses $B 280 million from its account at CBB to pay for imports from country B.

On **December 31, 2017**: the currency swap is unwound.

A. Exchange of Deposits with Maintenance of Value

November 30, 2016

No transactions recorded. (same for all other cases)

January 2, 2017

Assets	**CBA (mill. $A)**		**Liabilities**
Deposit Account at CBB, FC	1,000	CBB's Deposit Account, NC	1,000

Assets	**CBB (mill. $B)**		**Liabilities**
Deposit Account at CBA, FC	1,200	CBA's Deposit Account, NC	1,200

March 31, 2017

Assets	**CBA (mill. $A)**		**Liabilities**
Deposit Account at CBB, FC	857	CBB's Deposit Account, NC	1,000
Maintenance of Value, CBB's Account CBB	143		

Assets	**CBB (mill. $B)**		**Liabilities**
Deposit Account at CBA, FC	1,400	CBA's Deposit Account, NC	1,200
		Maintenance of Value, CBA's Account	200
Loss			**Profit**
Valuation Adj., CBA's Account	200	Valuation Adj., Account at CBA	200

Alternatively, if the valuation adjustment is credited to the CBA's deposit account, the recording will be:

Assets	**CBA (mill. $A)**		**Liabilities**
Deposit Account at CBB, FC	1,000	CBB's Deposit Account, NC	1,000

Assets	**CBB (mill. $B)**		**Liabilities**
Deposit Account at CBA, FC	1,400	CBA's Deposit Account, NC	1,400
Loss			**Profit**
Valuation Adj. CBA's Account	200	Valuation Adj. Account at CBA	200

June 30, 2017

Assets	**CBA (mill. $A)**		**Liabilities**
Deposit Account at CBB, FC	1,000	CBB's Deposit Account, NC	500
Correspondent Account German Bank, FC	-500		

Assets		CBB (mill. $B)	Liabilities
Deposit Account at CBA, FC	700	CBA's Deposit Account, NC	1,400
Correspondent Account German Bank, FC	700		

September 30, 2017

Assets		CBA (mill. $A)	Liabilities
Deposit Account at CBB, FC	800	CBB's Deposit Account, NC	500
Accrued Interest, CBB's Account	6.14	Accounts Payable (Exporter Country B)	-200
Loss			**Profit**
		Accrued Interest, CBB's Account	6.14

Assets		CBB (mill. $B)	Liabilities
Deposit Account at CBA, FC	700	CBA's Deposit Account, NC	1,120
		Resident Bank (Exporter's), NC	280
		Accrued Interest, Account at CBA	8.59
Loss			**Profit**
Accrued Interest, Use of Account at CBA	8.59		

December 31, 2017

Before the currency swap is unwound, reflecting that the central banks need to replenish their deposit accounts with the counterpart central bank:

Assets		CBA (mill. $A)	Liabilities
Deposit Account at CBB, FC	1,000	CBB's Deposit Account, NC	1,000
Accrued Interest, CBB's Account	12.35	Accrued Interest, Account at CBB	4.82
Correspondent Account (buying of $B)	-204.82		
Loss			**Profit**
Accrued Interest, Use of Account at CBB	4.82	Accrued Interest, CBB's Account	12.35

Assets		CBB (mill. $B)	Liabilities
Deposit Account at CBA, FC	1,400	CBA's Deposit Account, NC	1,400
Accrued Interest, CBA's Account	6.75	Accrued Interest, Account at CBA	17.29
Correspondent Account (buying of $A)	-717.29		
Loss			**Profit**
Accrued Interest, Use of Account at CBA	17.29	Accrued Interest, CBA's Account	6.75

Unwinding of the currency swap:

Assets	CBA (mill. $A)		Liabilities
Deposit Account at CBB, FC	-1,000	CBB's Deposit Acc., NC	-1,000
Accrued Interest, CBB's Account	-12.35	Accrued Interest, Use of Account at CBB	-4.82

Assets	CBB (mill. $B)		Liabilities
Deposit Account at CBA, FC	-1,400	CBA's Deposit Account, NC	-1,400
Accrued Interest, CBA's Account	-6.75	Accrued Interest, Account at CBA	-17.29