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REVIEW OF THE METHOD OF THE VALUATION OF THE SDR—INITIAL CONSIDERATIONS

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**International Monetary Fund
Washington, D.C.**



REVIEW OF THE METHOD OF VALUATION OF THE SDR—INITIAL CONSIDERATIONS

July 16, 2015

EXECUTIVE SUMMARY

This paper lays out initial considerations for the quinquennial review of the method of valuation of the Special Drawing Right (SDR) currency basket. As in previous reviews, a key objective is to enhance the attractiveness of the SDR as an international reserve asset. In that context, the review will assess the currencies for SDR basket inclusion, currency weights, and the SDR interest rate basket.

The paper takes as a starting point the conclusions of the last review in 2010 and the subsequent Board discussion of currency selection criteria in 2011. At the time of the last review, China met the gateway export criterion but the *renminbi* (RMB) was not included in the SDR basket as it was not judged to be freely usable, the second currency selection criterion. In light of the Board's broad support in 2011 for the existing legal framework, and since China continues to meet the export criterion, this paper discusses building blocks relevant for a future determination on whether to include the RMB in the basket under the existing criteria.

The paper details the increasing international use of the RMB, albeit from a low base, since the last SDR valuation review. Across a range of indicators, the RMB is now exhibiting a significant degree of international use and trading. At the same time, the four freely usable currencies generally rank ahead of the RMB.

The operational implications of including the RMB in the SDR basket are also considered. Availability of representative market-based exchange and interest rates is essential for the proper functioning of the SDR basket and the Fund's financial operations, and the ability to hedge SDR-denominated positions is important to many Fund members and other SDR users. Restrictions on access to onshore markets pose difficulties in these areas, although some potential mitigating measures have been identified and the Chinese authorities have begun to implement such measures.

The paper points to several areas for further work that may help inform the Board's final judgment. These include additional work to close data gaps, refine the quantitative analysis for the freely usable assessment, and evaluate, in consultation with the membership and SDR users, whether the RMB would meet operational requirements, including as a result of continued liberalization measures that are being implemented by the authorities.

The paper also discusses a possible extension of the current valuation basket for a period of nine months to September 30, 2016. This proposal, which could be adopted after the informal Board discussion on a lapse of time basis, does not prejudge the timing and outcome of the review. Rather, it would respond to concerns expressed previously by SDR users that introducing a new basket on the first trading day of the year can expose them to increased risks and costs. It would also help reduce uncertainty for SDR users and facilitate continued smooth SDR-related operations, while allowing adequate time to make necessary changes to contractual arrangements, including in the event the Board ultimately decides to add a new currency to the basket.

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I. INTRODUCTION

1. This paper lays out initial considerations for the quinquennial review of the method of valuation of the Special Drawing Right (SDR) currency basket. Under the current valuation method, the SDR currency basket is reviewed every 5 years.¹ Reviews typically evaluate the currency selection criteria, the selection of currencies, the weighting methodology, and the composition of the SDR interest rate basket. Broader issues related to the role of the SDR in the international monetary system and SDR allocations are outside the remit of this review.

2. The last SDR valuation review was conducted in 2010.² The review concluded that four currencies (euro, Japanese yen, British pound, and U.S. dollar) would continue to comprise the SDR basket and adjusted the weights according to the existing formula. At that point China met the gateway export criterion but the *renminbi* (RMB) was not included in the SDR basket as it was not judged to be *freely usable* and thus did not meet the second selection criterion. Directors also supported a forward-looking work program to review issues related to the valuation of the SDR.

3. In 2011, the Executive Board revisited the currency selection criteria.³ Most Directors supported maintaining the existing criteria. While a number of Directors were open to exploring alternative criteria, Directors stressed that the bar for inclusion should not be lowered. There was also broad agreement on the indicators to inform the assessment of freely usable currencies, though the Board emphasized that these indicators should not be applied mechanistically and that future assessments would continue to rely importantly on judgment. Directors considered that the number of currencies in the basket should remain relatively small to avoid adding undue costs and complexity for SDR users, while agreeing that the exact number should not be prejudged.

4. In light of the relatively recent review by the Board, staff does not propose to revisit the currency selection criteria at this point. Recent developments suggest that the current selection criteria have remained broadly supportive of the SDR basket's stability and its representativeness of the use of currencies in international transactions.

5. Under the current framework, since China continues to meet the export criterion, a key focus of the review will be the determination on whether the RMB is a freely usable currency. If the RMB were determined to be a freely usable currency, it would play a more central role in the Fund's financial operations going forward, and it would qualify for inclusion in the SDR basket. As background, the paper describes the broad principles that have guided past SDR valuation reviews; outlines the legal framework and interpretation of the freely usable concept; updates the Board-endorsed freely usable indicators; discusses potential new indicators and

¹ The quinquennial review of the SDR currency basket is provided for under Decision No. 12281-(00/98) G/S adopted 10/11/00 (referred to hereafter in the text as "the 2000 decision").

² See [IMF Executive Board Completes the 2010 Review of SDR Valuation](#), Public Information Notice No. 10/149.

³ See [IMF Executive Board Discusses Criteria for Broadening the SDR Currency Basket](#), Public Information Notice No. 11/137.

complementary data sources; and considers potential operational issues that would arise if the RMB was included in the SDR basket. The paper also proposes extending the current valuation basket until September 30, 2016.

6. More work needs to be done in the months ahead to inform this year’s SDR valuation review. Some data gaps remain and operational issues need to be resolved in order to help inform the Board’s final judgment.

7. The paper is organized as follows. Section II provides relevant background by describing the SDR’s origins and the broad principles that have guided past SDR valuation decisions. Section III outlines the current legal framework for the SDR valuation. Section IV discusses the currency selection criteria and considerations that will help inform the freely usable assessment of the RMB. Section V covers operational issues that would arise if the RMB were included in the SDR basket, while Section VI discusses the number of currencies in the basket. Initial considerations on the weighting formula, interest rate basket, and valuation period are covered in Section VII, while Sections VIII offers a summary and issues for Directors’ discussion.

II. SDR VALUATION—ORIGINS AND GUIDING PRINCIPLES

8. The SDR valuation framework aims at supporting the SDR’s purpose as an international reserve asset. The SDR was created as a supplemental reserve asset to facilitate the growth of international trade and financial flows and contribute to the stability of the international monetary system (Annex I).⁴ It is a source of unconditional international liquidity, as SDR holders with balance of payments needs can use SDRs without restriction to obtain currency. The SDR is also central to the Fund’s operations, used as its unit of account and in transactions between the IMF and its members, such as purchases and repurchases of Fund credit.

9. In adopting SDR valuation decisions, the Executive Board has been guided over the years by a number of broad principles. These broad principles, whose aim is to enhance the attractiveness of the SDR as a reserve asset, consist of the following:⁵

- *The SDR’s value should be stable in terms of the major currencies.* Wide fluctuations of the SDR exchange rate against the major global currencies, as occurred, for instance, during the period when the SDR was linked to the U.S. dollar, could undermine the SDR’s attractiveness as a store of value. Undue influence of a particular currency or group of currencies on the value of the SDR was seen as undesirable. Because of these considerations the Board decided to determine the value of the SDR using a basket of currencies.

⁴ The Second Amendment to the Articles of Agreement required Fund members to collaborate with the objective of “...making the special drawing right the principal reserve asset in the international monetary system.” (Article VIII, Section 7; and Article XXII).

⁵ See [Criteria for Broadening the SDR Currency Basket](#) (9/23/11), page 6.

- *The currencies included in the basket should be representative of those used in international transactions.* Representativeness ensures that the component currencies are used by members in international transactions and that the exchange rates that determine the value of the SDR are backed by active foreign exchange markets. A representative set of currencies also provides some degree of diversification.
- *The relative weights of the currencies included in the basket should reflect their relative importance in the world's trading and financial system.*
- *The composition of the SDR basket should be stable in that it should not change easily from one review to the next.* The chief argument for stability in the basket composition is to provide certainty to SDR users and thus support the role of the SDR as a reserve asset. Given that international currency use typically evolves slowly as a result of persistent underlying fundamentals, a selection rule should be expected to select the same currencies on the basis of similar data used in consecutive reviews. By the same token, needed changes should be made without delay on the basis of an agreed methodology. Once a needed change becomes apparent, it could be assumed that a delay in making it may mean that a larger change might eventually be needed.
- *There should be continuity in the method of SDR valuation such that revisions in the method of valuation occur only as a result of major changes in the roles of currencies in the world economy.* In the same way that changes in the composition of the basket should change only as a result of changes in patterns of international currency use, the method of valuation should not be subject to frequent adjustments, but rest on how currencies are used in the world economy. For example, as the importance of financial flows in international transactions increased, they were more explicitly accounted for in the SDR valuation method through the adoption of the freely usable criterion.

III. LEGAL FRAMEWORK FOR SDR VALUATION

10. The role of the SDR as a reserve asset is underpinned by a strong legal framework for the SDR valuation. The Articles of Agreement set the overall parameters for SDR valuation. Within the framework established under the Articles, the specific SDR valuation method is adopted through an Executive Board decision. Unless amended with the required majorities, the approved SDR valuation method has to be applied in determining value of the SDR.

11. The Articles of Agreement give the Executive Board broad authority to determine the method of valuation of the SDR, subject to special majority requirements.⁶ The Articles do not establish any specific substantive requirements or a methodology for SDR valuation. Rather, they only specify the relevant majorities for valuation decisions as follows: as a general rule, the method

⁶ See Article XV, Section 2.

of valuation for the SDR is determined by a 70 percent majority of the total voting power, provided that an 85 percent majority of the total voting power is required for (i) a change in the principle of valuation, or (b) a fundamental change in the application of the principle in effect. The Articles provide no further guidance as to the type of change that would require an 85 percent majority, and the Executive Board has never developed such a list.⁷ The Executive Board, by a decision adopted by a majority of the votes cast, has the authority to decide which of the two special majorities is applicable. To date, all decisions that have changed the method of SDR valuation have been adopted by the Fund with a 70 percent majority of the total voting power.⁸

12. The current SDR valuation method was adopted by the Board in 2000. Under the 2000 decision, the SDR valuation method has the following key elements: (i) currency selection criteria, (ii) currency weighting, and (iii) periodicity of SDR valuation.⁹

- **Currency Selection Criteria:** The SDR basket comprises the four currencies: (a) that are issued by Fund members (or by monetary unions that include Fund members) whose exports of goods and services during the 5-year period ending 12 months before the effective date of the valuation decision had the largest value; and (b) which have been determined by the Fund to be freely usable currencies in accordance with Article XXX(f).
- **Currency Weighting:** The respective percentage weights of the currencies are based on the relative share of each currency in reserve holdings by monetary authorities and the value of exports of goods and services (see Section VII).

⁷ It should be noted that the term “principle of valuation” is not synonymous with the broad principles discussed in Section II above. A change in the valuation method, however, that would bring the method outside of these broad and longstanding principles would prompt an assessment of whether they amount to a change in “principle of valuation” that would require an 85 percent majority of the total voting power.

⁸ Changes to the SDR valuation method have included: (i) in 1980, the reduction of the number of currencies from 16 to 5 and the application of the new 5-year review periods beginning January 1, 1981 to replace the then 5-year review periods that began July 1, 1978 (see Decision No. 6631-(80/145) G/S, adopted 9/17/80); (ii) in 1998, the replacement of the Deutsch mark and French franc with the euro in the SDR currency basket (see Decision No. 11803-(98/101) G/S, adopted 9/21/98); (iii) in 2000, the addition of the “freely usable” criterion for SDR basket currency selection and the move from a member-based to a currency-based approach (see Decision No. 12281); and (iv) in 1990 and 2005, the assignment of one percent extra to the weighting of the U.S. dollar due to its strength based on the supplementary financial indicators, which were deviations from the 1980 SDR valuation method and the current SDR valuation method, respectively (see Decision No. 9549-(90/146) G/S, adopted 10/5/90, and Decision No. 13595-(05/99) G/S, adopted 11/23/05).

⁹ Changes to the SDR basket that take place as a result of the application of the 2000 decision (including adding or removing currencies at the time of a scheduled review, and changing the currency weights) can be adopted with a majority of the votes cast. A special majority is only required if the Fund changes the SDR valuation method. For example, the adjustment of currency weights at the time of the 2010 review was adopted by a majority of the votes cast.

- **Periodicity of Valuation:** The currency selection and weights are established for 5-year periods, with the current period expiring on December 31, 2015. It has long been recognized that a review can take place earlier if warranted by developments in the international financial system.¹⁰

13. The remaining portion of this section provides guidance on the legal framework that is applicable to currency selection criteria, namely: (a) the export—or gateway—criterion; and (b) the freely usable criterion.

A. Export (“gateway”) criterion

14. Exports have historically played a central role for SDR basket selection. Export shares were originally the sole criterion for currency selection for the SDR basket. This size-related criterion is meant to reflect countries’ relative importance in global commerce, ensure an adequate supply of reserve assets, and limit the number of currencies in the basket.¹¹

15. The export criterion is assessed based on balance of payments data. The 2000 decision clarifies that in the case of a monetary union, the determination of the value of exports of goods and services of the union excludes trade of goods and services among members that are part of the union. Under the decision, a currency can only be replaced in the basket by another currency if the value of exports of the member or monetary union whose currency is not included during the relevant period exceeds those of a member or monetary union whose currency is included in the basket by at least 1 percent.

B. Freely usable criterion

16. The SDR valuation decision requires that, in addition to meeting the export criterion, currencies for SDR basket inclusion must “have been determined by the Fund to be freely usable currencies in accordance with Article XXX(f) of the Fund’s Articles.” This criterion was introduced in the SDR valuation method as a second criterion for currency selection in 2000 to recognize the importance of financial transactions for SDR valuation purposes. It was seen as a way to consider a broad range of measures of the breadth and depth of financial markets to ensure that the SDR contained those currencies that were most representative of use in the world trading and financial systems. While financial variables had been used to broadly confirm the direction of currency weighting since 1985, they had not been a formal criterion under the SDR valuation method.

¹⁰ For example, in 1980, the Board conducted an SDR review and approved a new basket outside of the then-July 1, 1978–June 30, 1983 5-year cycle. See Decision No. 6631-(80/145) G/S adopted 9/17/80. The Executive Board may also decide to either extend or shorten the valuation period of the SDR basket, which constitutes a change in the SDR valuation method. In 1998, in the context of proposing the replacement of the Deutsch mark and French franc with the euro in the SDR basket, staff proposed the extension to 2003 of the basket approved in 1995 (i.e., beyond its normal 5-year period), but the Board did not support this proposal. See [EMU and the Fund—Valuation of the SDR and the SDR Interest Rate](#) (9/1/98).

¹¹ See [Criteria for Broadening the SDR Currency Basket](#) (9/23/11).

17. The freely usable concept was developed for, and plays a key role in, Fund operations.

It was developed in the context of the Second Amendment of the Articles in 1978 to ensure that a member purchasing another member's currency from the Fund would be able to use it, directly or indirectly, to meet its balance of payments needs.¹² Thus, freely usable currencies reduce the potential risks and costs for members receiving and using currencies in transactions with the Fund.¹³

18. In the context of GRA transactions, members that are issuers of freely usable currencies have different legal obligations from those that are not.

A member whose currency is not freely usable is under the legal obligation to ensure that balances of its currency sold by the Fund can be exchanged for a freely usable currency of its choice at the time of purchase (Article V, Section 3(a)).¹⁴ In the context of a repurchase transaction, such member also has to ensure that a repurchasing member can obtain balances of its currency selected by the Fund for repurchase against a freely usable currency of its choice (Article V, Section 7(j)(i)). Both transactions take place at the official Fund exchange rate for the currencies in question. On the other hand, a member whose currency is freely usable is under no legal obligation to convert balances of its currency sold by the Fund into another freely usable currency. Such member is only required to collaborate with the Fund and other members to enable the exchange of its freely usable currency.¹⁵ If the member as part of the cooperation agrees to convert its currency into another currency, the exchange does not have to take place at the official Fund rate. This framework implies that purchasing or repurchasing members might ultimately have to rely on market exchanges if they want to exchange a freely usable currency obtained in purchase, or if they have to acquire a freely usable currency selected by the Fund for repurchase.

19. The term “freely usable currency” is defined under the Articles. Specifically, Article XXX(f) defines a freely usable currency as one that “the Fund determines (i) is, in fact, widely used to make payments for international transactions and (ii) is widely traded in the principal exchange markets”. Both elements under this definition, “widely used” and “widely traded,” have to be satisfied for a currency to be determined freely usable.

¹² Prior to the Second Amendment, members whose currencies were purchased from the Fund had no obligation to convert their currencies into a currency that the purchasing member, financed under a Fund arrangement, could use to deal with its balance of payments needs. The absence of such an exchange obligation gave rise to a major inequity when a purchasing member in a General Resources Account (GRA) transaction would not be able to use that purchased currency to meet its payment needs. It also rendered the Fund's holdings of currencies less effective.

¹³ See [Criteria for Broadening the SDR Currency Basket](#) (9/23/11).

¹⁴ Similarly, in the SDR Department, under a transaction by designation, a participant facing a balance of payments need can request that another participant who was designated to provide currency in exchange for SDR provide a freely usable currency. See Article XIX, Sections 2–5.

¹⁵ If a member purchases a freely usable currency from the Fund and wishes to exchange it at the time of purchase for another freely usable currency, the issuer of the purchased currency has the right to request such exchange be made through the issuer, for another freely usable currency selected by the issuer and at the official Fund rate. See Article V, Section 3(e)(iv).

20. Although the definition of a freely usable currency set forth in the Articles is relatively specific, it is not self-executing. Rather, it requires an interpretation as to what is meant by “in fact, widely used to make payments for international transactions,” and “widely traded in the principal exchange markets.” In interpreting the Articles of Agreement, the Fund draws principally on public international law principles on the interpretation of international treaties, which require that “a treaty shall be interpreted in good faith in accordance with the ordinary meaning given to the terms of the Treaty in their context and in light of its object and purpose.”¹⁶

21. Taking into account the above considerations, the interpretation of “freely usable currency” is guided exclusively by the purpose for—and the context within—which it is established under the Articles of Agreement; namely, as an integral element of the framework that enables the Fund to provide temporary balance of payments assistance to members. Specifically, the requirement that a currency is “in fact, widely used to make payments for international transactions” is designed to ensure that a currency may be *directly* used to meet a member’s balance of payments need, while the requirement that a currency be “widely traded in the principal exchange markets” is designed to ensure that it may be *indirectly* used, i.e., that it can be exchanged in markets for another currency to meet a member’s balance of payments need with reasonable assurances of no substantial adverse exchange rate effect.¹⁷ It has been recognized in past applications that “widely used” would be best assessed by examining the degree to which trade and service payments as well as financial account transactions are undertaken in the currency, and that “widely traded” was understood to imply that there should be “reasonable assurance” that the market for the currency in question has sufficient depth so that no appreciable change in the exchange rate would occur when a member country transacts a sizable amount of that currency.¹⁸

22. Although the Executive Board has decided to “borrow” the freely usable currency concept for purposes of determining the valuation of the SDR, this decision cannot change the meaning and the purpose of freely usable currency as established under the Articles. It is open for the Board to decide to no longer rely on the freely usable currency criterion for purposes of SDR valuation. As long as an alternative criterion is consistent with the “principle of valuation” referred to in Article XV, Section 2, such a decision may be adopted by a 70 percent majority of the total voting power.¹⁹

¹⁶ Article 31(1) of the Vienna Convention on the Law of Treaties.

¹⁷ The “widely used” and “widely traded” requirements also enable members whose currency is not a freely usable currency but who have to provide a freely usable currency if their currency is selected in a purchase transaction to provide a freely usable currency from their existing reserves or to buy or sell such a currency in the foreign exchange markets without disadvantage.

¹⁸ [Criteria for Broadening the SDR Currency Basket](#) (9/23/11).

¹⁹ Such alternative criteria, including the “reserve asset criterion”, were discussed in [Criteria for Broadening the SDR Currency Basket](#) (9/23/11).

23. In addition to the above general guidance, the following observations may be made with respect to the legal interpretation of three specific aspects of the “freely usable currency” concept.

- **“Principal exchange markets”:** In order for a currency to be freely usable it must be widely traded in the principal exchange markets. During the drafting of this provision as part of the Second Amendment process it was recognized that a freely usable currency would not need to be widely traded in *all* exchange markets, but it had to be traded in more than one principal exchange market. The Fund’s identification of the principal exchange markets may evolve over time, taking into account both financial and technological developments (Annex II).
- **Currency convertibility:** It was recognized from the outset that full convertibility was neither a necessary nor a sufficient condition for a currency to be a freely usable currency. A currency may be widely used and widely traded even if the issuing member retains some restrictions. Conversely, a currency that is fully convertible may not be sufficiently in demand to be considered widely used and widely traded. For purposes of identifying those principal exchange markets where the currency in question is widely traded, it will be necessary that there be sufficient liberalization within the market in question to ensure that members who may receive financing from the Fund have adequate access to this market.
- **International transactions:** It has always been recognized that the transactions that are relevant for an assessment of whether a currency is widely used for “international transactions” include both current and financial account transactions. Moreover, and consistent with the way the term “international transactions” has been interpreted in the context of other provisions of the Articles, the object and purpose of the freely usable definition indicates that transactions should only be considered international for purposes of the freely usable criterion if they take place between members (Box 1). As discussed further below, it is recognized, however, that some payments made within the territory of a member may be attributable to transactions that are international (Annex III).

Box 1. “International Transactions” under Article XXX(f)

The term “international transactions” in the legal definition of freely usable currency raises a number of issues of interpretation, in particular whether it has the same meaning as under Article VIII, Section 2(a) where it has long been interpreted to mean “transactions between members.”

Article XXX(f) defines “freely usable currency” as a currency that “(i) is, in fact, widely used to make payments for international transactions, and (ii) is widely traded in the principal exchange markets.” (italics added) The question of how to interpret international transactions has particular relevance for three categories of transactions: (i) transactions between territories of a member where each territory has its own currency; (ii) transactions between members of a monetary union; and (iii) transactions between residents of a member that involve another member’s currency.¹

The term “international transactions” has been most extensively interpreted in the context of Article VIII, Section 2(a). A 1959 Board paper acknowledged that treating payments for current transactions between territories of a member where separate currencies are involved as international “could be defended as reasonable,” but concluded that “this was not the way the provision was intended to operate.”² Rather “international transaction” was interpreted to mean a transaction between members. It is generally *presumed* under principles of Treaty interpretation that if a word or phrase is used on multiple occasions in the text of a treaty, the parties intended for it to bear the same uniform meaning. However, this *presumption* may be rebutted where it can be shown that, in the given context of the term, and the object and purpose of the treaty, a different meaning was intended.³

Both the context and purpose of the freely usable currency concept under the Articles support the conclusion that the term “international transactions” under Article XXX(f) also means “transactions between members”. The objective of the freely usable currency concept under Article XXX(f) in the context of Fund financing is to ensure that a member purchasing another member’s currency under a Fund arrangement will be able to use it, directly or indirectly, to meet its balance of payments need. Financing from the Fund is provided to members to address their balance of payments needs vis-à-vis the rest of the world. In assessing the balance of payments need of a member, it has been specifically recognized that the Fund looks at the overall balance of payments need of the member, including all of its constituent territories.⁴ Accordingly, the use of a currency in payment for transactions between members provides the best indication of its direct usability by a purchasing member to meet its balance of payments need. In contrast, this would not appear to be the case for transactions between territories of the same member, even if they have different currencies, or transactions between residents of the same member, even if payment takes place in a foreign currency. The use of a currency in payments for transactions between members of a monetary union, on the other hand, provides an indication of the direct usability of the currency since the common currency can be used to meet balance of payments needs vis-à-vis other members of the monetary union.

It is recognized, however, that some payments within the territory of a member may be attributable to transactions that are international. As discussed later in the paper, further analysis will be needed to assess how to capture those transactions in the freely usable analysis (Annex III). Moreover, for SDR valuation purposes (i.e., for purposes other than the “freely usable” determination), the Executive Board has broad discretion to eliminate intra-monetary union transactions among different members when making an assessment of the international use of a currency under relevant indicators (Box 2).

¹ The first category is relevant regarding the use of RMB in transactions among Mainland China, Hong Kong SAR, Macao SAR, and Taiwan Province of China; the second is relevant for use of the euro in transactions among euro area members; and the third arises in many circumstances where foreign currencies are used for transactions

Box 1. “International Transactions” under Article XXX(f) (concluded)

among residents of a non-issuing member (e.g., use of U.S. dollars for payment of transactions among U.K. residents in London markets).

² This paper was discussed by the Executive Board prior to its adoption of the Fund’s current policy on Article VIII and Article XIV. See Decision No. 1034-(60/27), adopted 6/1/60. In 1999, in the context of a measure restricting the purchase of foreign exchange for travel from the Mainland to Hong Kong SAR and Macao SAR, this interpretation was applied and the relevant transactions between residents of the Mainland and residents of Hong Kong SAR and Macao SAR were not considered “international” (and therefore not subject to Article VIII).

³ See also Robert Jennings and Arthur Watts (eds.), *Oppenheim’s International Law*, vol. 1, 9th ed., Harlow: Longman, 1992, p. 1273; and Richard Gardiner, *Treaty Interpretation*, Oxford: Oxford University Press, 2008, p. 165–66 (among others).

⁴ The relevant balance of payments need for accessing Fund resources by China was specifically discussed by the Executive Board committee on an *ad-hoc* quota increase for China in 2000, where staff stated in response to a question on possible access by China to Fund financing to assist Hong Kong SAR that, “there would have to be an overall balance of payments financing need affecting the entire country, not just Hong Kong SAR.”

24. The Executive Board has relied on quantitative indicators as an input in assessing whether a currency is freely usable. While the Board has broad discretion in the selection of indicators to guide its determination, the selection of the indicators should be guided by their ability to provide relevant information for assessing both elements of the freely usable currency definition. Regarding the widely used element, indicators should be selected and constructed to capture use of currency in payments for current and financial account transactions between members, while indicators on widely traded should aim at assessing the depth and liquidity of trading a currency in the principal exchange markets. It has been recognized that these indicators may evolve over time taking into account both financial developments and the evolution in the availability of relevant data.

25. The final Board determination of what currencies constitute freely usable currencies consistent with the definition in Article XXX(f) ultimately requires judgment on the part of the Executive Board. It has been emphasized on previous occasions that quantitative indicators cannot be applied mechanistically and that ultimately the determination of which currencies are freely usable needs to rely on a qualitative judgment framed by the definition of freely usable currency set out in the Articles of Agreement, including on the number of currencies (Box 3).²⁰ The determination that a currency is freely usable is a decision by the Board, by a majority of the votes cast, but the Fund has to consult with a member before a currency is put on, or removed from, the list of freely usable currencies.²¹

²⁰ See [IMF Executive Board Discusses Criteria for Broadening the SDR Currency Basket](#), Public Information Notice No. 11/137.

²¹ Rule O-3(b) of Fund Rules and Regulations. Consultation does not mean concurrence and the final decision lies with the Fund.

Box 2. Treatment of Monetary Unions in the SDR Valuation Framework

In 1998, the Executive Board agreed on an interim approach of an automatic replacement of the Deutsche mark and the French franc with the euro in the SDR basket. At that time, the only criterion for inclusion in the SDR basket was exports. The automatic replacement was regarded as consistent with the SDR valuation framework, as the combined exports of France and Germany were nearly exactly equal to the combined exports of the euro-area as a whole (net of intra-union trade), producing an initial weight for the euro that closely reflected the importance of the euro area in international trade. The inclusion of the euro as a freely usable currency was also an automatic replacement for the mark and the franc, as financial indicators for the euro did not exist yet at that time.¹

The inclusion of the euro in the SDR basket raised the issue of the treatment of intra-monetary union flows and prompted the change to a currency-based framework in 2000.² Prior to the change in the 2000 review, the SDR valuation framework was member-based. The 2000 Board decision explicitly states that for assessing the export criterion and for determining currency weights, exports of goods and services of the monetary union would exclude trade among members of the union.³ Similarly, for currency weights, only holdings of the currency by monetary authorities outside the union would be used in calculations. In contrast with the export criterion and the weighting methodology, the freely usable criterion that was adopted also in the 2000 review is member-based (Box 1). Consequently, the indicators used in the freely usable assessment presented in this paper do not net out intra-euro area positions.

Consistent with the 2000 decision, SDR reviews have generally followed the currency-based approach. The 2010 review presented exports, reserves, and supplementary financial indicators in the context of alternative weighting formulas with intra-euro area positions netted out and included an extensive discussion of these indicators.⁴ The 2011 paper on SDR valuation criteria considered indicators in the context of possible reform options for the selection criteria.⁵ Intra-monetary union positions were not netted out for the two financial indicators where such an adjustment would have been called for, but the paper noted that this was due to data limitations.

¹ See Decision No. 11857-(98/130) G/S adopted 12/17/98.

² See [Review of the Method of Valuation of the SDR](#) (10/12/00). The 2000 review also added the freely usable criterion to the SDR valuation framework, but did not include a reassessment of the four currencies in the basket that had already been determined by the Fund to be freely usable.

³ Decision No. 12281.

⁴ See [Review of the Method of Valuation of the SDR](#) (10/26/10).

⁵ See [Criteria for Broadening the SDR Currency Basket](#) (9/23/11), Appendix II.

26. If a currency has not been determined to be freely usable but meets the export criterion at the time of an SDR valuation review, the assessment of whether it is freely usable can take place as part of the review. It is not required, as a legal matter, that in that context the Fund undertake a comprehensive review of all currencies that could potentially meet the requirements under the Articles. If, however, a currency is determined to be freely usable at the time of an SDR valuation review, and other currencies have very similar outcomes on the relevant indicators, for consistency reasons, the same standards would apply if the Executive Board later undertook a broader review of potential new freely usable currencies. As indicated above, inclusion requires consultation with the relevant member and the record indicates that in the past the Fund

has taken into account members' preferences to not have their currency included in the list of freely usable currencies.²²

Box 3. Previous Assessments of Freely Usable Currencies

The assessment of freely usable currencies in 1977/78 is the only comprehensive assessment to date. Based on staff's analysis at the time, the U.S. dollar, Deutsche mark, and British pound met both criteria (widely used and widely traded) most completely. The analysis also suggested that the French franc should probably be added since a large number of members held it in reserves. A few other currencies, namely the Canadian dollar, Netherlands guilder and Japanese yen, also "seemed to satisfy the criteria" and had played "a growing role in international payments." Staff expressed a preference for a shorter rather than longer list of freely usable currencies since, as the list was lengthened, the added currencies appeared to "conform less fully" to the criteria utilized. In the end, the Executive Board determined five currencies—the Deutsche mark, French franc, Japanese yen, British pound, and U.S. dollar—as freely usable currencies, reflecting an exercise of judgment.

In 1998, the Board decided that the euro would be added to the list of freely usable currencies and the Deutsche mark and French franc were removed from the list. The Board concluded that since the Deutsche mark and French franc had both been determined by the Fund to be freely usable currencies, it could be reasonably expected that the euro also would be freely usable, underpinned by its status as the currency of a large group of members. Therefore, the Board deemed it a freely usable currency from the outset.

In 2010, the RMB was not judged to be freely usable. Since China met the export gateway criterion for SDR inclusion, an assessment of whether the RMB was a freely usable currency was conducted in order to determine whether it met the second criterion for SDR inclusion. Since China was the only issuer of a non-SDR currency to meet the gateway criterion, the freely usable assessment focused on the RMB. The Board concluded that the RMB was not yet widely used in international transactions or widely traded in the principal exchange markets, and was thus not judged to meet the criteria to be a freely usable currency at that time.

IV. CURRENCY SELECTION CRITERIA

A. Appropriateness of the Current Criteria

27. The Executive Board undertook a comprehensive review of the SDR currency selection criteria in 2011 and supported maintaining the existing criteria.

- **Most Directors agreed on the important role of a size-related criterion and supported maintaining the export gateway criterion.** They also agreed that augmenting the export criterion with financial flows would be desirable in principle, but that it would require first that data shortcomings be addressed.

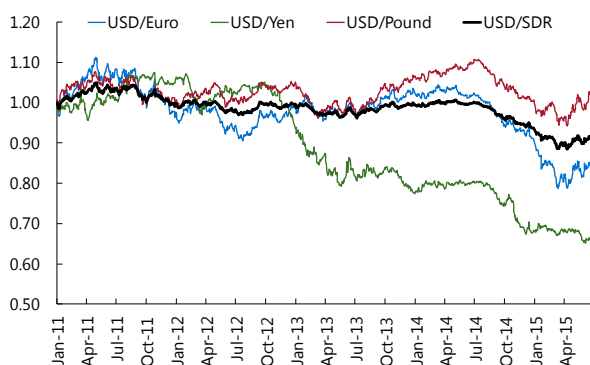
²² In the 1977–78 assessment of freely usable currencies, the Board appears to have taken into account the Netherlands and Canadian authorities' views to not have their currencies included.

- **The Executive Board also supported maintaining the freely usable criterion.** A number of Directors were open to exploring alternatives along the lines of a “reserve asset criterion,” but most Directors viewed the freely usable criterion as remaining appropriate.²³

28. The current selection criteria have remained broadly supportive of the SDR basket’s stability and its representativeness of the use of currencies in international transactions.

- **Since the current basket took effect on January 1, 2011, the day-to-day volatility of the SDR against its component currencies has remained low.** The SDR/U.S. dollar exchange rate has fluctuated in a narrow range, albeit with the dollar appreciating strongly in the second half of 2014, reflecting its appreciation against the three other currencies in the basket (Figure 1 and Table 1).

Figure 1. Exchange Rate Movements, 2011–15



Sources: International Monetary Fund, *International Financial Statistics*.

Table 1. Exchange Rate Volatility 1/

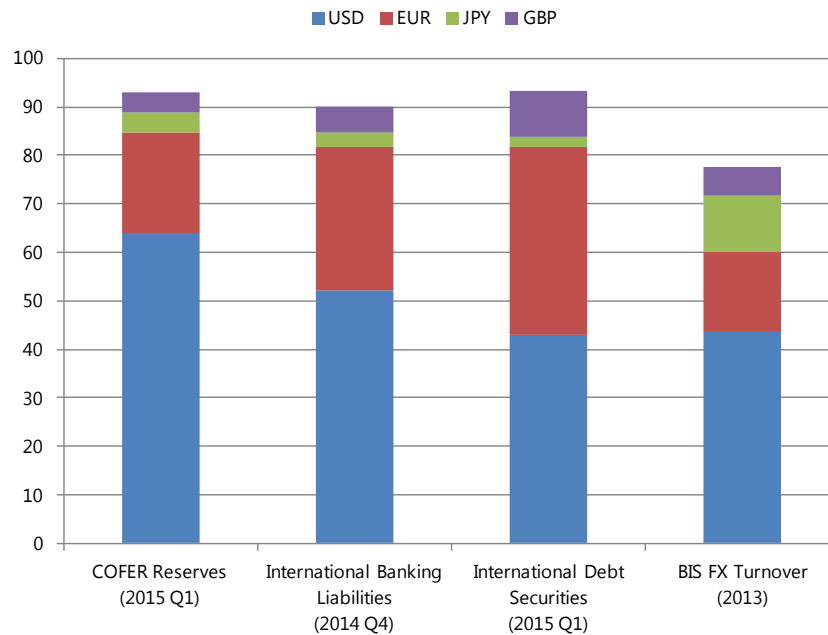
	2010	2011	2012	2013	2014
Pound Sterling	0.51	0.41	0.30	0.36	0.24
Euro	0.58	0.57	0.40	0.35	0.28
Japanese yen	0.46	0.40	0.33	0.56	0.36
SDR	0.25	0.26	0.17	0.17	0.13

Sources: IMF, *International Financial Statistics*; and Fund staff calculations.
1/ Measured as the mean of absolute daily percentage change in spot exchange rates against the U.S. dollar, based on noon exchange rates in the London market.

- **The currencies identified by the current criteria also remain highly relevant in the global trade and financial systems.** As shown further below, the euro area, the United States, Japan, and the United Kingdom continue to be among the top exporters, along with China. The U.S. dollar, euro, Japanese yen, and the British pound also account for a large share of global financial transactions (Figure 2). Other than the rising share of the RMB, the overall pattern of reserve holdings, foreign exchange turnover, and other financial indicators has not changed substantially since the last review.

²³ [IMF Executive Board Discusses Criteria for Broadening the SDR Currency Basket](#), Public Information Notice No. 11/137.

Figure 2. Concentration of Freely Usable Indicators
(Cumulative share of world total accounted for by top currencies)



29. In light of the relatively recent review by the Board, staff does not propose to revisit the current currency selection criteria. Developments do not suggest a need for further conceptual work on alternative criteria at this stage. Since the quality and country coverage of data on financial flows has not changed significantly since 2011, staff proposes to maintain exports as the gateway criterion for inclusion, along with the freely usable criterion. However, as discussed above, the criteria for selection are under the broad authority of the Board and can be revisited if Directors wish to do so.

B. The Export Criterion

30. Exports provide a first test for the possible inclusion of currencies into the SDR basket.²⁴ While there have been significant shifts in export shares across the membership since the last SDR valuation review, with many emerging market and developing countries gaining greater importance, the overall picture in terms of leading countries remains broadly unchanged.²⁵

²⁴ Consistent with past applications of the valuation framework, exports of goods and services include data on merchandise exports, services, and income.

²⁵ The data presented are preliminary and based on the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)*. The 2010 review was based on *BPM5*. The main methodological change with respect to exports is the recording of goods for processing, which was previously recorded in goods trade on a gross basis (i.e., both the value of goods sent and returned), but is now recorded in services on a net basis (i.e., only the value added).

- **The euro area and the United States remain the largest exporters, accounting for about one-third of the global total (Table 2 and Figure 3).** Compared to the last review, their share (measured as 5-year averages) has fallen somewhat.

Table 2. Exports of Goods and Services 1/
(5-year averages; in percent of global total)

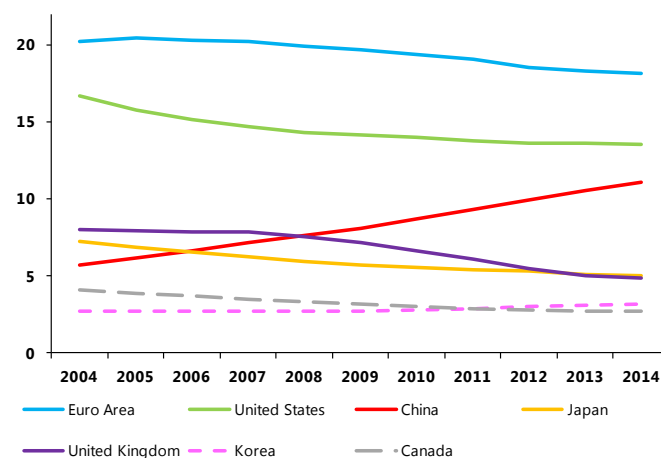
2005–09			2010–14		
	SDR bn	%		SDR bn	%
Euro area	2,138	19.8	Euro area	2,648	18.2
United States	1,539	14.2	United States	1,978	13.6
China 2/	872	8.1	China 2/	1,613	11.0
United Kingdom	780	7.2	Japan	728	5.0
Japan	616	5.7	United Kingdom	708	4.9
Canada	341	3.1	Korea	465	3.2
Korea	296	2.7	Singapore	401	2.8
Singapore	269	2.5	Canada	394	2.7
Switzerland	269	2.5	Switzerland	388	2.7
Russia	268	2.5	Russia	387	2.7
<i>Memo Item:</i>					
Mainland China	831	7.7	Mainland China	1,536	10.6

Sources: IMF, World Economic Outlook; IMF, Direction of Trade Statistics; Census and Statistics Department, Hong Kong SAR; and Fund staff calculations.

1/ Includes income credits. Intra-euro area exports are excluded.

2/ Includes Mainland China; Hong Kong SAR; and Macao SAR. Exports of goods between these three regions are excluded. Exports of services between Mainland China and Hong Kong SAR until 2013 are excluded. Income credits between these economies cannot be excluded as no geographical breakdown is available after 2009. Macao SAR only has data through 2013.

Figure 3. Exports of Goods and Services 1/
(5-year averages; in percent of global total)



Sources: IMF, World Economic Outlook; IMF, Direction of Trade Statistics; Census and Statistics Department, Hong Kong SAR; and Fund staff calculations.

1/ See notes to Table 2.

- **China continues to meet the export criterion.**²⁶ China already joined the list of top exporters at the time of the 2010 review. The data suggests that it continues to be the third-largest exporter, having significantly reduced the gap with the United States and the euro area.
- **Japan and the United Kingdom are the fourth- and fifth-largest exporters respectively.** Their export shares have fallen somewhat since the last review, with Japan’s share now exceeding the share of the United Kingdom by a narrow margin.
- **The next-largest exporters are well outside the leading group.** The exports of Korea, Singapore, Canada, Switzerland, and Russia are far from the required threshold of exceeding the exports of another member in the SDR basket by 1 percent.

²⁶ Consistent with the 2000 decision, China’s exports are measured at the level of the member, i.e., including Hong Kong SAR and Macao SAR, but excluding (most) intra-exports between these regions. However, the conclusion also applies if exports are measured at the level of Mainland China.

C. The Freely Usable Criterion

31. With China continuing to meet the export gateway criterion, under the current framework for currency selection, the review will focus on determining whether the RMB is a freely usable currency. This section discusses building blocks for such a determination. Under the legal framework for the SDR valuation, the freely usable determination is based on the definition in the Articles of Agreement, ultimately requiring Board judgment with quantitative indicators as inputs. Information is provided on indicators that the Board has endorsed in the past, as well as additional indicators that could usefully complement them. Various conceptual issues related to the underlying data and areas where further work is needed are also discussed.

Indicators: General Considerations

32. Indicators are an indirect means of assessing whether a currency is widely used and widely traded. Given the interpretation of these concepts described above, ideally an assessment of widely used would be based on the full currency composition of the balance of payments and international investment position and an assessment of widely traded would compute across a number of foreign exchange (FX) markets a member's costs to convert the currency received in a Fund transaction and the reaction of market prices to such conversions. However, the lack of availability of such data requires the use of summary indicators as indirect proxies in the widely used assessment. Caution must be exercised in interpreting these proxies, also since their information content can change over time.

33. The Board-endorsed indicators remain relevant for the freely usable assessment. After the initial assessment of freely usable currencies in 1977–78 there was no further comprehensive discussion of the freely usable currency concept until 2011. At that time, the Board considered the indicators to be used for the assessment of the freely usable criterion in the context of the review of alternative SDR valuation criteria. Directors agreed that the shares of currencies in official reserve holdings, international banking liabilities (IBL), and international debt securities (IDS) would be important factors for the assessment of wide use, and the volume of transactions (i.e., turnover) in FX markets for wide trade.²⁷

34. While in many ways these indicators remain useful proxies for wide use and wide trading of a currency, they have some shortcomings. They do not capture some aspects of international currency use, such as the currency composition of balance of payments flows or non-resident investment in domestic debt markets.²⁸ Moreover, methodological changes after the 2011

²⁷ See [Criteria for Broadening the SDR Currency Basket](#) (9/23/11) and [IMF Executive Board Discusses Criteria for Broadening the SDR Currency Basket](#), Public Information Notice No. 11/137.

²⁸ For example, the non-resident private sector holds approximately \$2 trillion in U.S. Treasury bonds. Non-resident investment in domestic currency bond markets in emerging markets has also been rising in recent years. These holdings are generally not captured in the IDS because they are issued domestically under local law.

discussion changed the information content of the Board-endorsed indicator on IDS.²⁹ The financial indicators for wide use are all stocks outstanding, tending to respond to changing trends in currency use with inertia, which may understate the importance of dynamic currencies. Definitions of international transactions under the various indicators are not consistent across indicators and are not always aligned with the interpretation of international transactions under Article XXX(f). For example, IBL include all liabilities in foreign currency, including to residents. IDS, meanwhile, include securities issued by residents in foreign currency in the local market where registration is not under local law, and exclude non-resident holdings of domestic currency debt issued in the local market. There are also gaps in the currency coverage of data on official reserve holdings and IBL, and in the timeliness of the preferred source of FX market turnover data, the BIS Triennial Survey, with the latest data from 2013.

35. Some additional indicators and data sources, each with their own advantages and disadvantages, could complement the indicators previously endorsed by the Board.³⁰ The additional indicators are (i) official holdings of foreign currency assets; (ii) the issuance of IDS, to complement the existing indicator on the stock outstanding; (iii) cross-border payments; and (iv) letters of credit for trade finance. Additional data sources are used for FX turnover to provide a more recent picture than the latest BIS survey. The aim is to broaden the currency coverage, capture cross-border flows in addition to stocks in order to better reflect recent trends in the use of currencies, provide more timely data for foreign exchange turnover, and capture some additional aspects of international currency use. That said, the additional indicators and data sources also have some drawbacks, for example incomplete coverage of the relevant transactions, and indicators based on flows are more susceptible to volatility, but staff sees these indicators as useful complements to the assessment nonetheless.

36. Bid-ask spreads are a possible secondary indicator for assessing widely traded, as discussed by the Board in 2011, though they need to be interpreted with caution. Bid-ask spreads from the New York FX market were included in the 1977–78 freely usable assessment. Even in today’s deeper and more interconnected markets, spreads can vary widely throughout the day and across time zones, though most data sources provide only indicative quotes for a transaction of standard size. Moreover, spreads can be affected by policies and restrictions on capital flows.³¹ Staff is exploring whether a broad sample of transaction-by-transaction data can be obtained to permit analysis across a range of markets, currencies, and trading conditions.

²⁹ IDS, compiled by the BIS, now cover securities issued in markets where the issuer is a non-resident. Previously, they also covered issuance of securities that were *targeted* at non-resident investors, but it proved difficult to identify these securities (see Annex V).

³⁰ See Annex V for the concept captured by each indicator, data sources, coverage, timeliness, and other technical details.

³¹ See [Criteria for Broadening the SDR Currency Basket](#) (9/23/11).

37. In applying widely traded, a determination is also required as to what constitutes the “principal exchange markets.” The rise in prominence of electronic trading has increased the ease and efficiency of trading across physical market locations and the evolution of bids and offers for each currency pair may be continuously monitored, weakening the link between data on FX turnover by market and the actual location of the transacting parties (Annex II). Trading activity now occurs virtually around the clock, with a large share of transactions either through electronic trading platforms or using prices set with reference to them. Nonetheless, market activity and trading volumes remain closely tied to the business hours of major financial centers. In this context, “principal exchange markets” are best understood in terms of three broad time zones—corresponding roughly to the Asian, European, and North American market hours—rather than geographical market locations.³² In light of the requirement for a currency to be widely traded in multiple, but not necessarily all, principal markets, this could lend itself to the interpretation that members need to be reasonably assured of sufficient market depth in at least two of the three time zones.

38. The widely traded assessment should consider whether a member can transact a sizable amount of the currency at any time with the reasonable assurance that the market for that currency has sufficient depth so that no appreciable change in the exchange rate will occur. While aggregate FX turnover is generally correlated with a market’s depth, breadth, and resilience, it does not completely capture these characteristics, and more granular analysis is therefore desirable to ensure that markets can handle sizable transactions in a currency without affecting the exchange rate. A meaningful metric to help answer this question would be to compare a market’s depth with the size of Fund-related transactions. In addition, the assessment would have to take account of typical FX trading strategies. For instance, market participants would split large orders into smaller transactions to keep the exchange rate from moving against them—indeed, this practice is becoming increasingly automated in the past few years. Also, risk management practices may limit the size of exposures that agents are willing to take on. This implies that foreign exchange conversions of a size relevant for Fund operations are likely to take place via multiple transactions, typically conducted with a number of agents and over a period of time.

39. The treatment of Hong Kong SAR, Macao SAR, and Taiwan Province of China presents methodological issues for the computation of some indicators. Interpreting international transactions as “transactions between members” (Box 1) means that RMB transactions within Hong Kong SAR, Macao SAR, and Taiwan Province of China, and between any of those three and the Mainland are not to be considered international transactions for the freely usable assessment. However, the appropriate treatment may not be so straightforward in the case of all indicators, especially given the status of Hong Kong SAR as a financial center in which business between the Mainland and the rest of the world is conducted. For instance, transactions among Hong Kong SAR residents or between residents of Hong Kong SAR and the Mainland can potentially reflect an

³² Among these three trading sessions, trading volumes have traditionally been dominated by the Tokyo, London and New York markets, respectively. More recently trading volumes in the Asian time zone have been nearly evenly split between the Singapore, Hong Kong SAR, and Tokyo markets.

underlying international transaction with another member not captured elsewhere (Annex III). Measuring the proportion of such transactions, however, presents difficulties. In some cases, similar issues may also be relevant for other international financial centers. The presentation of the indicators treats Hong Kong SAR, Macao SAR, and Taiwan Province of China as domestic where data is available and the text will note these methodological issues where relevant and discuss possible ways to address them where they appear to be quantitatively important.

Widely Used

40. A broad range of indicators shows—where data is available—increasing international use of the RMB, albeit from a low base, since the last SDR valuation review.

- **Official foreign exchange reserves.** Data for this indicator is sourced from the IMF's *Currency Composition of Official Foreign Exchange Reserves* (COFER) survey (see Table 3). However, the RMB is not separately identified in the survey.

Table 3. Official Reserves
(shares in percent of allocated reserves)

	2010:Q2		2015:Q1		
	SDR bn	%	SDR bn	%	
USD	2,026	62.5	2,818	64.1	
EUR	850	26.2	911	20.7	
JPY	103	3.2	182	4.2	
GBP	135	4.2	172	3.9	
CHF	4	0.1	AUD	83	1.9
AUD 1/		n.a.	CAD	82	1.9
CAD 1/		n.a.	CHF	13	0.3
Other	122	3.8	Other	135	3.1
Unallocated	2,453	43.1	Unallocated	3,893	47.0

Source: IMF, *Currency Composition of Official Foreign Exchange Reserves* survey.

1/ The Australian dollar and the Canadian dollar were not separately identified in COFER surveys until 2013.

- **Official foreign currency assets (OFA).** In light of the RMB reporting gap in COFER, staff conducted a survey of members' OFA holdings that includes both reserve assets and other foreign currency-denominated assets not included in reserves.³³ The OFA survey covered 16 currencies, including some not-fully-convertible ones like the RMB, compared to the seven currency coverage of COFER. The results closely mirrored COFER data for the currencies covered in both surveys. As for the RMB, 38 respondents reported holding RMB-

³³ OFA includes claims on residents, unlike COFER.

denominated assets, comprising 1.1 percent of total OFA (Table 4).³⁴ This level increased from 2013 to 2014, though it remains below the Australian dollar and Canadian dollar. The survey was conducted on the same strictly confidential basis as the COFER survey, and any RMB holdings that might have been reported by the Hong Kong Monetary Authority or the Monetary Authority of Macao could not be excluded without revealing confidential information.

Table 4. Official Foreign Currency Assets
(shares in percent of global total)

	2013			2014			
	SDR bn	%	Reporting countries	SDR bn	%	Reporting countries	
USD	2,701	61.3	127	USD	2,961	63.7	127
EUR	1,041	23.7	109	EUR	978	21.0	108
GBP	187	4.2	108	GBP	190	4.1	109
JPY	147	3.3	87	JPY	160	3.4	88
AUD	98	2.2	79	AUD	98	2.1	78
CAD	87	2.0	84	CAD	92	2.0	85
RMB	29	0.7	27	RMB	51	1.1	38
NZD	11	0.2	27	CHF	11	0.2	69
CHF	10	0.2	73	NZD	11	0.2	29
NOK	9	0.2	45	SEK	9	0.2	40
Other	66	1.9		Other	73	1.9	

Source: IMF staff survey of members.

- International banking liabilities (IBL).** IBL data for the RMB are not available on a comprehensive basis, since China does not currently report to the BIS, and reporting RMB-denominated positions separately is optional for other countries (Table 5).³⁵ The BIS has published an estimate of 1.9 percent for the global share of RMB-denominated international bank deposits by non-banks for end-2014. However, this does not include the IBL of banks resident in the Mainland and treats Hong Kong SAR, Macao SAR, and Taiwan Province of China as international.³⁶ The Chinese authorities have recently published data showing non-resident holdings of RMB-denominated bank liabilities in the Mainland amount to the equivalent of \$710 billion (this also treats Hong Kong SAR, Macao SAR, and Taiwan Province of China as international).³⁷ Staff is still in the process of determining to what extent the data is comparable to the BIS data. The information taken at face value, together with information

³⁴ Similar to the COFER survey, the OFA survey was distributed to the central banks/monetary authorities of 188 IMF member countries, Hong Kong SAR, Macao SAR, and three monetary unions.

³⁵ Staff is working with the BIS to assess whether an estimate of RMB-denominated IBL can be provided.

³⁶ BIS, 2015, *85th Annual Report* (Basle: Bank for International Settlements), page 85.

³⁷ PBC, 2015, *RMB Internationalization Report* (Beijing: The People's Bank of China).

on RMB-denominated liabilities offshore, would suggest that the RMB could be in the range of the Japanese yen and the Swiss franc. Staff is working to obtain the information that would be necessary to treat Hong Kong SAR, Macao SAR, and Taiwan Province of China as domestic.

- **International debt securities (IDS) outstanding.** RMB-denominated IDS outstanding accounted for 0.6 percent of the total in 2015Q1, up from less than 0.1 percent of the total in 2010 (Table 6). Staff is working to obtain the information that would be necessary to treat Hong Kong SAR, Macao SAR, and Taiwan Province of China as domestic.

Table 5. International Banking Liabilities

(shares in percent of global total)

2009:Q4		2014:Q4	
USD	47.7	USD	52.1
EUR	34.4	EUR	29.7
GBP	6.6	GBP	5.4
JPY	3.3	JPY	2.8
CHF	1.8	CHF	1.7
Other	6.3	Other	8.3
<i>Memo item (billion U.S. dollars):</i>			
Total	33,727	Total	33,341

Source: BIS locational banking statistics.

Table 6. International Debt Securities 1/

(shares in percent of global total)

2010:Q1		2015:Q1	
EUR	48.3	USD	43.1
USD	31.3	EUR	38.5
GBP	10.3	GBP	9.6
JPY	3.3	JPY	2.0
CHF	1.7	CHF	1.4
CAD	1.4	AUD	1.3
AUD	1.3	CAD	0.9
SEK	0.4	RMB	0.6
HKD	0.3	SEK	0.5
NOK	0.3	NOK	0.3
14th RMB	0.1		
Other	1.3	Other	1.8

Source: BIS Quarterly Review.
1/ Hong Kong SAR, Macao SAR, and Taiwan Province of China are treated as international.

- **Issuance of IDS.** BIS data on issuance of debt securities points to a rise in the RMB's share to 1.4 percent of the total, from a share of 0.1 percent in 2010 (Table 7). Staff is working to obtain the information that would be necessary to treat Hong Kong SAR, Macao SAR, and Taiwan Province of China as domestic.
- **SWIFT cross-border payments.** The coverage of this indicator is not universal and staff is examining potential issues on double-counting transactions, but the data provides a direct measure of the use of currencies in making payments for cross-border transactions. The RMB's importance is growing rapidly, with a 1.0 percent share of total payments over the last four quarters (2014Q2 to 2015Q1; Table 8), compared to a 0.2 percent share two years earlier (2012Q2 to 2013Q1). This measure treats Hong Kong SAR, Macao SAR, and Taiwan Province of China as domestic. However, staff will assess whether some RMB payments between Hong Kong SAR, Macao SAR, and Taiwan Province of China and the Mainland, and also between or within any of the first three reflect transactions undertaken by non-residents and should thus be treated as international. An upper bound of this effect is given by treating as international i) all RMB-denominated transactions between the Mainland and Hong Kong SAR, Macao SAR, and Taiwan Province of China; ii) all RMB-denominated

transactions among Hong Kong SAR, Macao SAR, and Taiwan Province of China; and iii) including for all currencies “third-party domestic use,” which is when residents within one economy use a currency issued elsewhere. On this basis, the RMB’s share would amount to 2.8 percent of total payments, with the RMB behind only the SDR currencies (see Annex V, Table 1).

Table 7. Issuance of International Debt Securities
(shares in percent of global total)

2010		2014	
USD	34.7	USD	42.1
EUR	45.7	EUR	37.1
GBP	9.4	GBP	11.6
JPY	2.3	JPY	1.8
AUD	1.8	AUD	1.7
CHF	1.8	RMB	1.4
CAD	1.0	CHF	0.8
HKD	0.5	CAD	0.5
NOK	0.3	HKD	0.5
BRL	0.3	NOK	0.3
RMB	0.1	BRL	0.2
Other	2.1	Other	1.9

Source: BIS Quarterly Review.
1/ Hong Kong SAR, Macao SAR, and Taiwan Province of China are treated as international.

Table 8. Cross-Border Payments 1/
(shares in percent of global total)

2012:Q2– 2013:Q1		2014:Q2– 2015:Q1	
EUR	48.3	USD	41.6
USD	32.5	EUR	36.6
GBP	3.6	GBP	4.3
JPY	2.9	JPY	3.3
CHF	2.6	CHF	2.4
CAD	2.0	CAD	2.3
AUD	1.9	AUD	1.9
SEK	0.7	RMB	1.0
HKD	0.6	HKD	0.9
RMB	0.2	SEK	0.7
Other	4.7	Other	5.0

Source: Staff calculations based on transaction values from SWIFT messages MT 103 and MT 202 excluding MT 202 COV.

1/ For RMB, Hong Kong SAR, Macao SAR, and Taiwan Province of China are not treated as international.

- **SWIFT trade finance.** In the absence of recent data on the currency invoicing of trade, the currency denomination of trade finance can inform how “widely used” currencies are for international trade transactions. SWIFT data on the currency denomination of letters of credit (L/C) cover about one-sixth of total trade.³⁸ RMB-denominated L/C accounted for 3.8 percent of the total in 2015Q1, treating Hong Kong SAR, Macao SAR, and Taiwan Province of China as domestic (Table 9).

³⁸ Committee on the Global Financial System, 2014, “Trade finance: developments and issues” *CGFS Papers*, No. 50 (Basle: Bank for International Settlements). However, there are limitations to using L/Cs as an indicator of the currency composition of trade finance. L/Cs are more common among Asian countries, and the indicator does not include inter-firm trade credit, which is an important portion of trade finance and more prevalent among advanced economies.

Table 9. Trade Finance (Letters of Credit) 1/
(shares in percent of global total)

2012:Q2– 2013:Q1		2014:Q2– 2015:Q1	
USD	87.2	USD	85.6
EUR	7.5	EUR	7.2
JPY	2.0	RMB	3.9
RMB	1.9	JPY	1.9
GBP	0.2	GBP	0.2
AED	0.1	CHF	0.2
INR	0.1	AED	0.2
SAR	0.1	INR	0.1
Other	0.8	Other	0.7

Source: Staff calculations based on transaction values from SWIFT messages MT 700.

1/ Cross-border letters of credit are letters of credit between two different countries. For RMB, Hong Kong SAR, Macao SAR, and Taiwan Province of China are not treated as international.

Widely Traded

41. BIS data available through early 2013 shows that the RMB's share of FX turnover has increased substantially, albeit from a low base. The BIS Triennial Central Bank Survey is the most comprehensive data source for global FX market turnover, being compiled by a number of central banks with extensive coverage of institutions and transactions. The current SDR currencies continued to account for roughly 80 percent of total turnover, with the shares of the U.S. dollar and the Japanese yen rising since the last review and those of the euro and British pound falling (Table 10). The RMB's total share increased to 1.1 percent (daily average turnover of \$120 billion) in 2013, up from 0.4 percent (\$34 billion) in 2010.³⁹ The RMB's share of spot turnover was somewhat lower at 0.8 percent (\$34 billion). Total RMB turnover in 2013 trailed the Swiss franc, the Australian dollar, the Canadian dollar, and the Mexican peso in addition to the SDR currencies. However, as noted, the latest BIS turnover data (April 2013) is by now considerably outdated.

³⁹ For purposes of the widely traded assessment, the markets in which a currency is widely traded should be open to members of the Fund to use in exchanging currency received in Fund transactions and for reserves management purposes. Given remaining limitations in the access of Fund members and their agents to the onshore FX market (Annex IV), RMB turnover in this market may not be fully relevant for purposes of the freely usable assessment, despite the ongoing convergence between offshore and onshore exchange rates. As discussed in greater detail in Section V, this also raises an operational issue that would need to be addressed in the course of the review.

Table 10. Currency Composition of Global Foreign Exchange Market Turnover 1/2/
(shares in percent of global total)

		Spot				Total						
		2010		2013		2010		2013				
		US\$ bn	%	US\$ bn	%	US\$ bn	%	US\$ bn	%			
	USD	1,188	39.9	1,691	41.3	3,368	42.4	4,652	43.5			
	EUR	691	23.2	754	18.4	1,550	19.5	1,786	16.7			
	JPY	300	10.1	612	15.0	754	9.5	1,231	11.5			
	GBP	213	7.1	227	5.5	511	6.4	631	5.9			
	AUD	111	3.7	196	4.8	301	3.8	462	4.3			
	CHF	92	3.1	93	2.3	250	3.2	275	2.6			
	CAD	78	2.6	84	2.1	210	2.6	244	2.3			
	NZD	22	0.7	57	1.4	94	1.2	135	1.3			
	KRW	21	0.7	39	0.9	87	1.1	RMB	120	1.1		
	SEK	19	0.6	RUB	37	0.9	NZD	63	0.8	NZD	105	1.0
	19th	RMB	8	0.3	11th	RMB	34	0.8	17th	RMB	34	0.4
	Other currencies	238	8.0	268	6.5	715	9.0	1,048	9.8			

Source: BIS, Triennial Central Bank Survey.

1/ Nominal or notional daily average amounts in the month of April. Total includes spot transactions, outright forwards, foreign exchange swaps, currency swaps, options, and other products.

2/ Because each transaction involves two currencies, the nominal amounts by definition sum up to twice the total turnover for all currencies.

42. More recent information, while less comprehensive, suggests a continued rise in the RMB's share of FX turnover:

- **Regional and national surveys.** Staff obtained data from a number of regional and national sources (Annex V). Based on the latest available data, RMB daily average trading volumes could be around the equivalent of \$250 billion on a net-gross basis (Table 11).^{40, 41}
- **SWIFT FX transactions.** SWIFT data based on inter-bank messages used to confirm foreign exchange transactions shows an increase of 100 percent in total RMB turnover between the first quarter of 2013 and the first quarter of 2015. While the data should be treated with considerable caution given its limited coverage, the rate of growth suggests that RMB turnover is rising rapidly (Annex V).

⁴⁰ The BIS Triennial Survey publishes currency-specific FX turnover figures on a net-net basis, adjusted for both local and cross-border double counting, and market-specific FX turnover figures on a net-gross basis, adjusted only for local double counting. Table 11 presents FX turnover figures on a net-gross basis. In the April 2013 Survey, the net-net adjustment reduced RMB turnover by 23 percent relative to the net-gross figure. The RMB turnover figure for Mainland China is based on a survey of a greater number of banks than the BIS Triennial Survey.

⁴¹ It is not possible to obtain comparable updated figures for other currencies due to regional surveys' limited currency coverage. However, the \$250 billion RMB turnover remains below the April 2013 net-gross turnover of the Canadian dollar, Swiss franc, and Australian dollar (\$304 billion, \$349 billion and \$584 billion, respectively in the BIS April 2013 Triennial Survey).

Table 11. Foreign Exchange Turnover in Selected Markets
(in billions of US dollars)

Regional center 1/ 2/	Total FX turnover	RMB turnover	RMB turnover %	Increase since April 2013 %
London 3/	2,667	34.7	0.7	42.8
New York 4/	1,095	n/a	n/a	n/a
Singapore	481	n/a	n/a	n/a
Tokyo	363	1.8	0.2	167.8
Hong Kong SAR 5/	n/a	92.2	n/a	86.3
Australia	150	n/a	n/a	n/a
Canada 6/	60	0.3	0.3	597.7
China (on-shore) 7/	n/a	61.7	n/a	36.9

Sources: Regional foreign exchange committees; national sources; and Fund staff calculations.

1/ Adjusted for local but not cross-border inter-dealer double-counting (net-gross basis). Because each foreign exchange transaction involves two currencies, the nominal turnover for each currency adds up to twice the total FX turnover for each center. RMB turnover shares are out of 100%.

2/ Unless otherwise stated, turnover data refers to October 2014 and the increase in nominal RMB turnover is relative to BIS 2013 Triennial Survey net-gross figures.

3/ Nominal RMB turnover is an estimate based on published share for RMB turnover. In October 2014, RMB was the 13th most traded currency in London.

4/ RMB turnover in New York has not been considered substantial enough to be reported separately.

5/ Refers to an HKMA survey conducted for the month of April 2015 using the same methodology as in the BIS Triennial Survey.

6/ Nominal RMB turnover is an estimate based on published share for RMB turnover.

7/ Turnover for China refers to PBOC survey covering all banks reporting in the Mainland for the month of April 2015. Increase in RMB turnover is based on April 2013 figures for the PBOC sample.

43. Information on FX market activity by region shows RMB trading is most common in Asia, constitutes a small but growing share in Europe, and is still thin in North America. The RMB is one of the most-traded currencies in Asia. The share in London remains relatively low, approaching 1 percent, but is rising fast and has reached already a considerable absolute magnitude (about \$35 billion per day). There is very little trading in North American markets.

44. Data on hourly FX operations from the EBS Market central limit order book platform provides additional detail on the profile of spot trading in the offshore market throughout the day. It confirms that trading is most liquid during the hours the Asian market is open, which also includes the first half of the European trading day. It then becomes more modest in the last few hours of European trading and is very low between the close of the European market and the open of the Asian market. Staff is exploring whether data can be obtained across a number of currencies in order to provide a comparison.

45. Staff calculations suggest that markets' capacity to absorb potential FX conversions associated with Fund purchases is higher for the current freely usable currencies than for the RMB. The scale of potential currency conversions by Fund members can be estimated using metrics such as the average five largest purchases since 2010 (5 billion SDR) or the largest potential purchase as reflected by FCL commitments (50 billion SDR).⁴² The currency composition assumed for these purchases is based on creditor members' shares in the Financial Transactions Plan (FTP).⁴³ The results of this exercise suggest that transactions resulting from such purchases would amount to a somewhat larger share of FX market turnover for the RMB than for the current freely usable currencies and some other non-freely usable currencies (Table 12).⁴⁴ However, there is no clear benchmark for judging the point at which this would affect market pricing, considering also that any conversions would likely be broken up into smaller transactions to minimize price effects. Overall, it is worth noting that even a very large Fund-related transaction would still represent less than 10 percent of a day's worth of RMB turnover.

Table 12. Relative Size of Fund Purchase Operations 1/

	Illustrative purchases (Millions of US\$)		In percent of projected Spot FX turnover 3/	
	Avg. large purchase 1/	FCL 2/	Avg. large purchase 1/	FCL 2/
USD	3,342	33,421	0.19	1.86
EUR	1,861	18,611	0.25	2.52
JPY	542	5,415	0.08	0.78
GBP	499	3,541	0.21	1.50
AUD	115	1,155	0.07	0.70
CHF	101	1,014	0.11	1.07
CAD	194	1,937	0.23	2.34
RMB	536	5,356	0.79	7.88
Memo:				
<i>Total</i>				
<i>purchase</i>	<i>7,045.12</i>	<i>70,451.16</i>		

1/ Based on average of largest 5 purchases in 2010-2015.

2/ Scaled to Mexico's FCL.

3/ Based on BIS April 2013 turnover, growth rates in SWIFT turnover between 2013Q1 and 2015Q1, and ratio of spot market turnover to total turnover in BIS 2013.

⁴² These conservative metrics were chosen to ensure that freely usable currencies could be used in most if not all actual and potential Fund transactions. Potential capacity needs could of course be higher, especially if several transactions took place in a short period of time under stressed market conditions.

⁴³ This assumes balanced FTP member positions and that China supplies RMB. As the simulation is forward-looking, FTP shares are based on post-14th review quota shares. Alternative simulations using shares under the current FTP and New Arrangements to Borrow did not result in substantial differences.

⁴⁴ These calculations include FX turnover in Mainland China, assuming that if the RMB were deemed a freely usable currency Fund members would be granted full access to that market.

Summary

46. The preliminary data and analysis presented above suggest that the international use and trading of currencies occurs along a relatively wide spectrum. The U.S. dollar dominates by far, although the euro also accounts for a sizable share of international transactions. It is likely that all members with a balance of payments need would have a high probability of being able to directly use one of these currencies to meet a balance of payments need or to easily exchange it in the market for another intervention currency. Behind these two dominant currencies, the picture is more mixed, with the Japanese yen and the British pound following for most indicators.

47. The international use of the RMB is rapidly becoming more common across a range of instruments. The use and trading of the RMB has increased substantially since the 2010 review, from a low base. At the same time, other currencies have not experienced substantial changes in their relative prominence, underscoring that the rise of the RMB is the most significant development in international currency use since the last review. This notion is also supported by other contextual information such as the rising global network of RMB swap lines and the rapid growth in RMB payments from offshore clearing centers to the Mainland. Given that the bulk of policy reforms to support RMB internationalization have occurred since 2010 and the authorities intend to implement further measures (Annex IV), it is likely that their full impact has not yet materialized. These trends suggest that the growing international use and trading of the RMB is part of a durable trend. Further reforms to liberalize onshore markets would also have an impact. Staff will continue work on the issue of how widely used and traded the RMB is, including to address remaining data gaps and to deepen the analysis, which will provide additional input into the Board's future assessment of whether the RMB is freely usable.

V. OPERATIONAL ISSUES

48. Including the RMB in the SDR basket under current criteria would have important operational implications:

- As an issuer of a non-freely usable currency, China is currently *obliged* to exchange its currency for a freely usable currency when it provides quota-based or borrowed resources to the Fund in the context of GRA financing operations. By contrast, if the RMB was determined to be freely usable, China could provide balances of its own freely usable currency (RMB) to the Fund and would only be obliged to *collaborate* with the Fund and other members to enable such balances to be exchanged for the freely usable currencies of other members.
- There would be corresponding implications for other members' transactions with the Fund. Assuming that China would prefer to provide its own currency in purchases after the RMB is determined freely usable, borrowing members would receive RMB and would also need to secure RMB to settle future repurchases. Specifically, repurchases and NAB repayments currently allocated to China, which are currently paid in U.S. dollars, could be required to be repaid in RMB.

49. Like all currencies in the SDR basket and as a freely usable currency, the RMB would be expected to meet certain key operational requirements. In particular, the current construct of the SDR basket requires identifying suitable representative exchange rates for valuation purposes and a suitable reference interest rate for each of the currencies included in the basket. Fund members, their agents, and other SDR holders would need to have adequate access to RMB-denominated instruments for reserve management purposes and the ability to hedge risks. These elements, discussed in more detail below, are essential for the proper functioning of the Fund's financial operations and policies, and for other users of the SDR.

A. Exchange rates for SDR valuation and Fund operations

50. For SDR valuation purposes, two exchange rates play a key role. The *value of the SDR in terms of the U.S. dollar* is calculated daily by summing the values in U.S. dollars based on market exchange rates of the SDR basket currencies, currently taken from the same source at the same time.⁴⁵ The *value of the SDR in terms of all other member currencies* is subsequently calculated using "representative" exchange rates of these currencies against the US dollar.⁴⁶ For the RMB, this means that:

- Under the current decision, a suitable RMB/USD exchange rate would need to be available in the London (Bank of England) and New York (Federal Reserve Bank of New York) exchange markets, and from the European Central Bank (ECB), to determine the daily value of the SDR in terms of the U.S. dollar. Based on preliminary discussions with the Bank of England, it is expected that such a rate could be made available from the London exchange market.⁴⁷ Further inquiries are needed to ascertain the availability of suitable exchange rates from the New York market and the ECB.
- A market-based "representative" RMB rate in terms of the U.S. dollar would be needed to value the RMB against the SDR. The representative rate is currently the onshore fixing rate, i.e., central parity rate, announced daily by the CFETS at 9:15 a.m. However, this rate is not based on actual market trades, and can deviate by up to 2 percent from the onshore market exchange rate.⁴⁸ In the event of SDR inclusion, the Fund, in consultation with the Chinese authorities, would need to identify a market-based exchange rate that could be used as a

⁴⁵ For valuation purposes under Rule O-2(a), the SDR is valued using the middle rate between the buying and selling rates at noon in the London exchange market as determined by the Bank of England. If an exchange rate for any currency cannot be obtained from the London exchange market, the valuation is done using exchange rates obtained at noon from the New York exchange market and communicated to the Fund by the Federal Reserve Bank of New York or if not available there, on the basis of the euro reference rates of the European Systems of Central Banks communicated by the European Central Bank. Decision no. 6709-(80/189) adopted 12/19/80, as amended by Decision no. 12157-(00/24) adopted 3/10/00.

⁴⁶ Under the obligation to exchange balances of currencies into freely usable currencies in Article V, Section 3(e)(i), members are directed to make these exchanges with a rate that guarantees equal value exchanges for members using the SDR under Article XIX, Section 7(a). The exchange rates are derived using the representative rates of other freely usable currencies against the U.S. dollar.

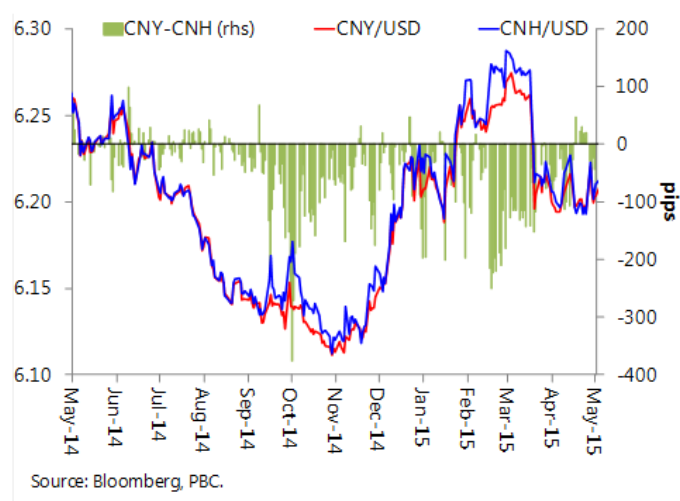
⁴⁷ By definition, this would be an offshore exchange rate.

⁴⁸ The market opens at 9:30 a.m.

representative rate for the RMB. Based on staff’s preliminary assessment, it appears that one of the benchmark exchange rates already calculated daily by the China Foreign Exchange Trading System (CFETS) would be suitable for this purpose.⁴⁹ For members not to be disadvantaged in using RMB over another freely usable currency in Fund transactions that are based on the onshore rate, access to the onshore market would have to exist so that members could buy and sell RMB at the prevailing onshore rate.

51. Deviations between the offshore (CNH) and onshore (CNY) RMB exchange rates raise potential operational issues. Deviations can occur due to remaining capital controls and other restrictions, although the exchange rates have been converging as more investors have gained access to the onshore market. Market participants generally consider the difference at current levels to be small enough to not be material; nevertheless, the divergence has at times been significant (see Figure 4).⁵⁰ The impact of any divergence on SDR users would be mitigated if SDR users have access to both the onshore and offshore market for conducting spot transactions.⁵¹ Deviations between the two rates imply that the CNH cannot be a perfect hedge for CNY-based exposures. However, members would always have the option of hedging in the onshore market where costs are broadly comparable at maturities up to two or three years (see below).

Figure 4. Renminbi Spot Onshore (CNY) and Offshore (CNH) Daily Exchange Rates
(Renminbi per U.S. dollar)



⁴⁹ CFETS calculates benchmark exchange rates for the CNY/USD four times a day. Commercial banks indicate that the 3:00 p.m. benchmark is preferred as this is when the market is most liquid. This time (close to the CNY market close), is also the closest to when the London market is open, and would therefore tend to minimize differences with respect to the exchange rate used for SDR valuation.

⁵⁰ In particular, the spread tends to increase when the CNH trades close to the bounds of the PBC’s exchange rate corridor.

⁵¹ The PBC has indicated that it currently provides a backstop to central banks wanting to operate in the onshore market if the liquidity is temporarily lacking and it could commit to do so also going forward if market liquidity were on occasions to be too thin to undertake necessary trades in CNY in an orderly fashion.

52. The increasing opening of the capital account should help to further reduce CNY-CNH divergences in the future. In particular, along with other liberalization measures, liquidity support provided to the offshore market via swap lines with other central banks (notably the HKMA) and the plans to allow offshore CNH clearing banks to access repo finance on CFETS should result in CNY and CNH rates trading even closer together going forward (Annex IV).⁵²

B. SDR interest rate

53. Availability of an appropriate interest rate instrument for the SDR basket is another key operational requirement. The SDR interest rate provides the basis for calculating the interest charged to members on loans from the IMF's general resources, the interest paid to members on their remunerated creditor positions in the IMF (reserve tranche positions and claims under borrowing agreements), and the interest paid to members on their SDR holdings and charged on their SDR allocations. It is also employed in computing interest paid to some *Poverty Reduction and Growth Trust* (PRGT) lenders and is a benchmark for the Fund's invested resources in the *Investment Account*. If a currency is added to the currency basket, it is expected that an instrument in that currency would be added to the interest rate basket, making the availability of such an instrument an important consideration.^{53, 54}

54. The Executive Board has previously agreed that the financial instruments in the SDR interest rate basket should have certain characteristics.⁵⁵ They should: (i) be broadly representative of the range of financial instruments that are actually available to investors in a particular currency; (ii) carry an interest rate that is responsive to changes in underlying credit conditions in the corresponding money market; and (iii) have risk characteristics that are similar to the official standing of the SDR itself, i.e., have a credit risk profile of the highest quality, fully comparable to that of government paper available in the market or, in the absence of appropriate official paper, comparable to the credit risk on prime financial instruments. The instruments should also reflect the actual reserve asset choice of reserve managers (for example, as regards the form of the financial instrument, its liquidity, and its maturity), which implies access of members to the instrument. It has been noted in previous discussions that such an instrument is expected to be available for a currency that is determined to be freely usable.

⁵² Full details of the repo market access have not yet been announced.

⁵³ The lack of availability of appropriate interest rate instruments was an important motivation in 1980 for removing the 11 of the 16 currencies in the SDR valuation basket that had not been in the 5-currency SDR interest rate basket until then.

⁵⁴ In 2000, staff explicitly preferred adding freely usable as a criterion over alternatives since it was considered more likely to guarantee the existence of an appropriate short-term interest rate instrument. See [Review of the Method of Valuation of the SDR](#) (10/12/00).

⁵⁵ See, for example, [Review of the Method of Valuation of the SDR](#) (10/26/10).

55. Staff has initiated discussions with the authorities about a possible RMB-based interest rate instrument for inclusion in the SDR interest rate basket. An assessment of a range of money-market interest rates suggests that the three-month sovereign yield, which is published daily by the China Central Depository and Clearing Company (CCDC), could possibly be considered for inclusion in the SDR interest basket.⁵⁶ While the secondary market for government securities with three-month residual maturity is relatively thin, market participants indicated that it was not difficult to buy such assets in the market if customers wanted them. A commitment by the Ministry of Finance to regular issuance of three- and six-month treasury bills could help market development by providing more certainty, which could significantly improve liquidity in this tenor and align it more with the guidelines for the SDR interest rate basket. Such issuance could in time be added to the benchmark securities for which the primary dealers must provide quotes. The authorities have recently announced measures to increase the access to the onshore bond market—including government securities—for central banks, other SDR users, and agents acting on their behalf. Staff is assessing whether these measures ensure sufficient access for the operational requirements of these investors.

C. Hedging

56. The ability to hedge their SDR-valued positions is important to many members. Borrowing and creditor members may want to hedge their SDR-denominated exposures, and some members may be required by their internal regulations to keep their balance sheets SDR-neutral. The SDR as currently constructed can be replicated in the market, allowing SDR positions to be hedged with reasonable precision and without excessive costs. Borrowers' hedging needs would depend on the repayment schedule of their purchases (up to 5 years for SBA and 10 years for EFF). This would imply a need to have availability of hedging instruments, such as cross-currency swaps, with long durations, or at least have shorter hedges that can be rolled over at reasonable cost, in order to mitigate exchange rate and interest rate risks.

57. Likewise, the ability to hedge is important for managing the Fund's Investment Account and Trust assets and for other institutions that may use the SDR for reporting or financial purposes. To mitigate exposure to foreign exchange risk, the Fund's Investment Account as well as the PRGT and other Trust resources are largely held with external managers in amounts proportionate to the share of the four currencies currently in the SDR basket. Introduction of the RMB into the SDR basket would thus require a rebalancing of these resources (i.e., by selling current SDR basket currencies for RMB). The ability to hedge SDR exposures is a key requirement to efficiently conduct transactions to manage these resources. Similarly, the World Bank would be impacted by RMB inclusion as it manages IDA resources in SDRs.

⁵⁶ The yield curve is estimated using the Hermite model. The data sources for constructing the yield curve include transaction data in the interbank bond market and exchange-traded bond market, bilateral bid-ask quotes in the interbank bond market and bond counters, and yield estimates from market participants.

58. Both the onshore and offshore markets trade interest rate and exchange rate forwards and swaps, repos, cross-currency swaps, and some options. Liquidity is considerably deeper in the offshore market in Hong Kong SAR at longer maturities, where trades out to 10 years are possible, and pricing for tenors out to 5 years is tight; the offshore market in London is liquid in the shorter maturities. Pricing is typically based on offshore interest rates; but these are increasingly aligned with onshore rates. The shorter tenors available in the onshore market in large part reflect the fact that hitherto most of the onshore market that is allowed access to derivatives is “real economy” trading, and demand does not tend to be much longer-term than 2–3 years; but the lack of on-shore liquidity and activity at longer tenors also reflects capital controls, and could improve with further liberalization.⁵⁷

59. The authorities have been easing restrictions on access to onshore markets, which should facilitate hedging and other operations by Fund members and other SDR users. The PBC announced on July 14 a package of reforms that (i) introduced a reporting form for central banks, sovereign wealth funds and international financial institutions requesting access to the onshore bond market; (ii) expanded the authorized investments to a broad range of interest rate instruments including repo, securities lending, and interest rate swaps; (iii) eliminated quotas for these investors; and (iv) allowed these investors to choose their onshore agent for these transactions. However, central banks are still required to use the PBC as their agent for FX transactions, and while the authorities have indicated that further lowering restrictions on access to exchange rate hedging instruments could be contemplated, for now they remain in place. Overall, staff is assessing whether these measures ensure sufficient access to the onshore bond market and related hedging instruments for central banks and other SDR users. As with all steps related to capital account liberalization, further measures will need to be carefully timed and sequenced.

VI. SIZE OF THE SDR BASKET

60. There have been limited changes to the number of currencies in the SDR basket over time. The original SDR basket comprised 16 currencies (Annex I). The Board reduced the number of currencies to five in 1980, comprising the U.S. dollar, Deutsche mark, French franc, British pound, and Japanese yen. In determining the size of the basket, the Board weighed the tradeoff between the objectives of representativeness and stability of the basket composition. A larger basket was considered more representative of global transactions. On the other hand, a small basket was considered more stable in its composition (as the ranking of currencies and the basket’s composition is less likely to change) and easier to replicate (reducing the cost and complexity for SDR users). Also, importantly, aligning the valuation basket with the interest rate basket that was based on these five currencies was deemed an important element to improve the attractiveness of the SDR as a reserve asset. These currencies were also the five that had been declared freely usable

⁵⁷ Mainland derivatives markets have more corporate participation, while in offshore markets the range of participants is more diverse and includes a higher proportion of financial institutions, which are active at much longer maturities.

in 1978. With the euro replacing the Deutsche mark and French franc in the basket in 2000, the basket size (as well as the number of freely usable currencies) became four.

61. At its 2011 discussion, the Board left open the question about the exact number of currencies in the SDR basket. Following the decision in 2000 to set the number of currencies in the SDR basket at four, the size of the basket was confirmed in subsequent reviews. The Board revisited the issue in 2011 and agreed that the number of currencies in the basket should not be prejudged, but should remain relatively small as the SDR evolves, to avoid adding undue costs and complexity for users, while at the same time being sufficiently representative in terms of currencies' use in international transactions.

62. Staff sees a case for SDR basket enlargement if the Board decided to include the RMB in the basket. In that situation, the Board could in principle decide to either add the RMB to the current SDR currencies, thus enlarging the basket to five currencies, or replace one of the existing currencies with the RMB. In the past, Board decisions on the size of the basket were largely based on "natural breaks in the data," consistent with the stability principle. The export shares of the fourth- (Japan) and fifth-largest (United Kingdom) exporters are close, and their relative ranking has switched over time. At the same time, the gap with the sixth-largest exporter (Korea) is substantial (Table 2). Thus, mindful of the stability principle discussed above, staff would not see a case to differentiate between the fourth- and fifth-largest exporters at this time. Past experience in operating with a 5-currency basket also suggests that the administrative burden of expanding the basket by one currency should be limited and manageable. This provides a case for maintaining all four current currencies in the SDR basket and adding the RMB as the fifth currency, if the Board were to judge that it meets the freely usable criterion. Expanding the basket to five currencies would require a 70 percent majority of Executive Board voting power as it changes the current SDR valuation method on the basket size.

VII. OTHER ISSUES FOR THE REVIEW

63. The SDR review also provides a potential opportunity to revisit and address other aspects of the valuation framework.

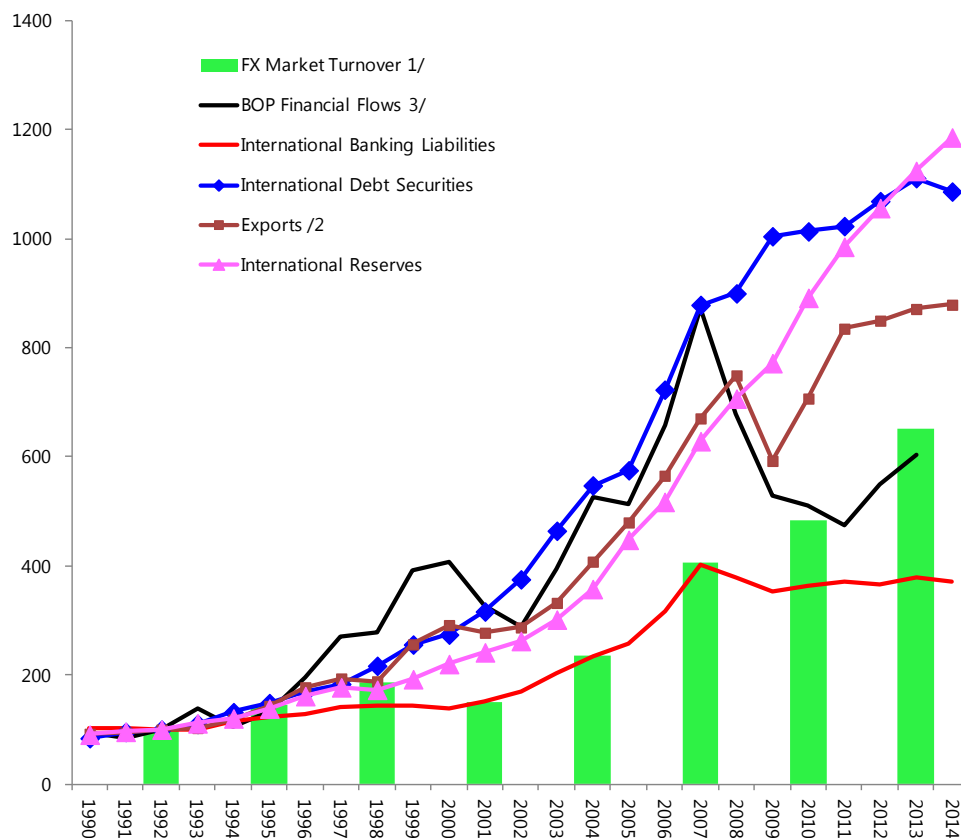
A. Weighting formula

64. The current method for determining currency weights dates back to 1978. Each currency's weight is endogenously derived by adding the issuer country's exports and the amount of the currency held in other countries' reserves (from the COFER survey), both expressed in terms of SDR. Exports are meant to reflect currencies' role in global trade, and member holdings of reserves are meant to capture currencies' importance in global financial flows. The relative weights of exports and reserves in the 2010 review were about 67 and 33 percent, respectively, and using latest data, would be about 60 and 40 percent, respectively. Each currency's weight would be broadly unchanged from the last review, with a small increase in the share of USD. Based on latest data, the currency weights would be around 45, 36, 10, and 9 percent for the U.S. dollar, euro, British pound,

and the yen, respectively, versus 42, 37, 11, and 9 percent at the time of the 2010 review.⁵⁸

65. Currency weights in the SDR basket are meant to reflect the relative importance of each currency in global trade and finance, and previous reviews have identified significant shortcomings of the current methodology. First, official reserves do not sufficiently reflect currencies' importance in global finance, especially the large increase in private international financial flows. Second, the current formula produces a higher weight for exports even though financial flows are larger and have grown more rapidly (Figure 5). Third, the formula combines export *flows* with *stocks* of reserves to endogenously derive weights, mixing incongruous inputs.

Figure 5. World Trade and Financial Indicators
(1992 = 100)



Source: IFS and BIS.

1/ Daily FX market turn-over in April of respective year; available triennially.

2/Exports of goods and services and income credits.

3/ Includes direct investment abroad, portfolio investment (assets), financial derivatives (assets), and other investments (assets).

⁵⁸ If the RMB were included in the SDR basket under the current weighting methodology, which is based on COFER where RMB data is not available, judgment and Board guidance would be needed on how to compute the RMB's weight. Among possible options, one would be to use the result of the OFA survey, which is conceptually different from COFER (see Section IV.B and Annex V). Another option would be compute the RMB's share using exports only. Preliminary estimates indicate a share of about 14 to 16 percent, depending on whether the RMB is added to the basket as the 5th currency or replaces one of the currencies in the basket.

66. Alternative weighting formulas were discussed in reviews since 1980, but never proposed for formal adoption. For example, both the 2005 and the 2010 reviews discussed alternative weighting formulas that gave more weight to financial indicators. Reflecting the problems of the current approach, most Directors during the 2010 review supported further work on improving the weighting, including assessing the role of trade and financial factors, and using supplementary financial variables for calculating currency weights.

67. Staff will develop proposals for Board consideration, building on work done for the 2010 review. These would seek to better align basket weights with currencies' relative importance in international transactions. The work would build on the extensive analysis undertaken for the 2010 review, which in turn drew on staff work in previous reviews.

B. SDR interest rate methodology

68. The SDR interest rate is set weekly, based on 3-month instruments representing the four SDR currencies. These have been the interest rate basket parameters since 1983.

69. Some technical changes have recently been made to the SDR interest rate basket.⁵⁹ In October 2014, a floor of 5 basis points was established for the SDR interest rate to ensure its consistency with the Articles of Agreement in a near-zero interest rate environment, and to address issues related to the functioning of the burden sharing mechanism. Moreover, as of January 1, 2015, the interest rate representing the euro was changed, when the three-month Eurepo rate was replaced by an estimated three-month rate for euro area central government bonds, as calculated by the ECB and covering bonds with a rating of AA and above.

70. Shortcomings identified in the 2010 review could be revisited, but this would not seem to be a priority issue for this review. The 2010 SDR review underlined that the reset frequency being different than instruments' maturity could make it difficult to replicate the SDR interest rate in the market since the remuneration of the SDR functions like a deposit rate that does not include capital gains and losses. Preliminary discussions with some reserve managers also suggest that a daily rather than weekly reset of the SDR interest rate would facilitate hedging, and that interest rate instruments with maturities longer than three months may better reflect assets in which reserve managers typically invest. Given the focus of the current review on the RMB's assessment for inclusion and possibly on alternative weighting formulas, depending on Directors' guidance staff would see a case to revert to issues related to the interest rate basket at a later date.

⁵⁹ See [Recent Fall in the SDR Interest Rate—Implications and Proposed Amendments to Rule T-1](#) (10/16/14) and [The SDR Interest Rate Basket—Proposed Change of the Representative Interest Rate for the Euro and Amendment to Rule T-1\(C\)](#) (12/15/14).

C. Extension of the current basket beyond December

71. The current SDR basket expires on December 31, 2015. Following the 2010 review, the current basket became effective on January 1, 2011 for a 5-year period. In accordance with the 2000 decision, an Executive Board decision is needed before then on a new basket or to extend the current basket (which would require an Executive Board decision with a 70 percent majority of the total voting power).

72. SDR users and members have indicated that January 1 is not ideal for the inception of a new basket. Most markets are closed on January 1st and trading is relatively thin in the days before and after the New Year. This complicates portfolio rebalancing operations necessary to adjust to the new basket weights every five years.

73. The possibility of a new currency being included in the basket has also generated a higher-than-usual level of uncertainty for SDR users. Moreover, SDR users have underlined that should a new currency be added to the SDR basket, more lead time than usual would be required to adjust to the new composition. Many have indicated that a lead time of six to nine months would be desirable in such a case.

74. In light of these issues, staff proposes to extend the current basket until September 30, 2016. The extension would not in any way prejudice the outcome of the review or whether the RMB should be included in the basket. Rather, it would address concerns expressed previously by SDR users about introducing a new basket on the first trading date of the New Year. Early guidance on the current basket's duration would also help reduce uncertainty for SDR users and facilitate continued smooth SDR-related operations, while also allowing adequate time to make necessary changes to any contractual agreements, including to the PRGT and the Fund's invested resources. If Directors agree with the proposed extension, a separate decision would be circulated after the informal Board meeting for lapse-of-time approval.

VIII. SUMMARY AND ISSUES FOR DISCUSSION

75. This paper lays out initial considerations for the quinquennial review of the method of valuation of the Special Drawing Right (SDR) currency basket. It takes as a starting point the conclusions of the last review in 2010 and the subsequent Board discussion of currency selection criteria in 2011. In light of the relatively recent review by the Board, staff does not propose to revisit the currency selection criteria at this point. Recent developments suggest that the current selection criteria have remained broadly supportive of the SDR basket's stability and its representativeness of the use of currencies in international transactions. Since China continues to meet the export criterion, under the current framework, a key focus of the review will be the determination of whether the RMB is a freely usable currency. The paper focuses on developing the building blocks to inform such a determination by the Board.

76. The RMB's international use has been increasing, albeit from a low base, since the last SDR valuation review. The RMB has made substantial progress since the 2010 review notwithstanding the inertia that typifies international currency use, supported by a series of policy measures taken by the Chinese authorities. Across a range of indicators, the RMB is now exhibiting a significant degree of international use, especially in Asia and increasingly in Europe. Preliminary data shows that the RMB generally ranks among the highest of the non-freely usable currencies. At the same time, the RMB generally ranks behind the four freely usable currencies, with trade finance being a notable exception. The standing of the RMB under some indicators will also be affected by data adjustments to address measurement issues involving Hong Kong SAR, Macao SAR, and Taiwan Province of China. The RMB is now one of the most-traded currencies in Asia and the share in Europe is rising but from a low level, while trading in North America remains thin. More granular analysis suggests that the depth of FX markets for the RMB, while lower than that of the four currencies that are currently freely usable, may have reached a magnitude that could allow executing sizable transactions.

77. Significant work remains outstanding to inform the Board's determination with regard to the RMB's inclusion in the SDR basket. In the area of data analysis, pending issues include clarifying how some indicators will be defined for purposes of the assessment, comparing across multiple data sources for some indicators, and confirming final data.

78. On the operational side, a number of issues would need to be resolved if the RMB were included in the SDR basket. Suitable exchange rates for SDR valuation and for the RMB/SDR exchange rate for Fund operations appear to be available, and potential operational difficulties arising from divergences between offshore and onshore exchange rates could be gradually mitigated by increasing investor access to the onshore market. Member access to the onshore market is required if CNY rates are used in the context of Fund operations and might be needed to secure adequate depth in FX markets. The three-month sovereign yield could potentially be a suitable interest rate instrument for SDR basket inclusion, but further analysis is needed to verify that it is appropriate for this purpose. Similarly, hedging instruments are becoming increasingly available. The PBC has recently announced a package of reforms in these areas and staff is assessing whether they ensure sufficient access to the onshore markets for members and SDR users. The authorities are working closely with staff on outstanding issues in this area.

79. The ultimate assessment by the Board will involve a significant element of judgment. The rapidly-changing nature of RMB usage in the world trade and financial system poses challenges for the assessment. Judgment will have to be applied, including on the importance of the various indicators and their proximity to the freely usable concept.

80. Directors may wish to comment on the following issues:

- *Do Directors agree that the current criteria for SDR valuation remain valid?*
- *Are Directors in agreement with the focus of the current review on assessing the free usability of the RMB to consider its inclusion in the SDR basket?*
- *Are the suggested new indicators a useful supplement to the previously endorsed indicators?*
- *Do Directors agree that the current review should discuss proposals for changing the weighting formula?*
- *Do Directors support an extension of the current valuation basket until September 30, 2016*

Annex I. History of SDR Valuation Framework¹

The SDR valuation was initially linked to gold. Following its creation in 1969, the SDR's value was established in terms of gold with the aim of enhancing its attractiveness as a reserve asset. Although the SDR's value was gold-based, its value in terms of major currencies was expected to be stable based on the assumption that the actual exchange rate of the dollar would remain equal to its par value and there would be no exchange rate realignments between the dollar and other currencies. However, the devaluations of the dollar in 1971 and 1973 as well as the widespread floating in 1973 revealed that the gold-based valuation did not necessarily imply a stable value of the SDR in terms of major currencies.

In 1974, the SDR's value was redefined in terms of a basket of 16 currencies. After discussing four valuation techniques, the Board approved the standard basket method which determined the SDR's value in terms of the currencies of the 16 countries that had a share in world exports of goods and services in excess of 1 percent. Currency weights were based on export shares; however, the dollar's weight was adjusted upward in order to take into account its dominant role in international transactions. In contrast with the valuation basket, the interest rate basket included only five currencies for which market interest rates were readily available. Specifically, the interest rate was set at around half of a weighted average rate on short-term money market interest rates in the five largest countries in the valuation basket (combined market rate) to accommodate concerns from the United States about potential competition with the dollar from an SDR with a high interest rate, as well as concerns from developing countries on the increased costs of Fund credit.

In 1980, the SDR valuation basket was reduced to five currencies. Although staff proposed to reduce the size of the basket to five currencies in 1976 and 1978, it remained unchanged until 1980. However, the composition of the 16-currency basket changed slightly in 1978 when the analysis of export shares led to the replacement of the Danish krone and the South African rand with the Saudi Arabian riyal and the Iranian rial. Moreover, the SDR interest rate was increased to 60 percent of the combined market rate in 1976 and to 80 percent in 1978. In 1979–1980, there was an increasing appetite to align the composition of the SDR valuation and interest rate baskets. As staff showed that nine currencies had well-developed financial markets, Board discussions focused on whether the unified baskets would include nine or five currencies, with the choice implying a trade-off between a more stable value of the SDR and a more stable composition of the basket. At the same time, a few countries objected to the exclusion of their currencies from the SDR basket, while others argued that the weight of the U.S. dollar be set below the level indicated by the weighting formula (combined export and reserve shares). Staff noted, however, that an artificial adjustment to the

¹ This discussion draws from: de Vries, M.G., 1985, *Cooperation on Trial: The International Monetary Fund 1972–1978, Volume I: Narrative and Analysis* (Washington: International Monetary Fund); de Vries, M.G., 1985, *Cooperation on Trial: The International Monetary Fund 1972–1978, Volume II: Narrative and Analysis* (Washington: International Monetary Fund); Boughton, J.M., 2001, *Silent Revolution: The International Monetary Fund 1979–1989* (Washington: International Monetary Fund); and Boughton, J.M., 2012, *Tearing Down Walls: The International Monetary Fund 1990–1999* (Washington: International Monetary Fund).

dollar's weight would constitute a fundamental change, thereby requiring an 85 percent voting majority. The Board finally approved the five-currency basket proposal without significant adjustments to currency weights as well as increased the SDR interest rate to 100 percent of the combined market rate.

Several changes were made to the SDR's valuation in the period of 1998–2000, including the shift from a member-based to a currency-based approach as well as the introduction of the freely usable selection criterion. In 1998, the Board agreed on an interim approach to automatically substitute the euro for the Deutsche mark and the French franc in the SDR basket. In 2000 the Board decided that the SDR basket should comprise the currencies of the four largest exporting Fund members or monetary unions that have a currency determined by the Fund to be freely usable. Freely usable was added as a second criterion to bring financial considerations into the currency selection process, thus recognizing the growing importance of financial transactions in overall international transactions. It was also seen as a way to consider a broad range of indicators of the breadth and depth of financial markets to ensure that the SDR contained those currencies that were most representative of use in the world trading and financial systems, and also ensure the existence of a short-term interest rate instrument that is in conformance with the guidelines for the inclusion in the SDR interest rate basket. Finally, it was preferred over other alternatives because it allowed the Board to retain flexibility in exercising judgment when determining the currency composition of the SDR basket.

The Board reviewed the composition of the basket and the selection criteria in 2010 and 2011 but did not make any changes. In 2010, the Board concluded that although China had become the third largest exporter of goods and services, and had taken steps to facilitate the international use of its currency, the *renminbi* did not meet the freely usable currency criterion. In 2011, staff analyzed a number of reform options for the selection criteria, including alternatives to the freely usable criterion; however, the Board decided not to change the valuation method.

Annex II. Electronic Trading Platforms and Principal Exchange Markets

Modern market infrastructure, especially electronic trading, has transformed foreign exchange (FX) trading into a round-the-clock market. This has weakened the link between the market in which a transaction is booked and the location of the transacting parties. Asian FX market infrastructure is less concentrated geographically than in Europe or North America, but the main hubs have become highly integrated and are treated by market participants as a single market. At the same time, trading volumes remain the highest during the business hours of major financial centers. Overall, these developments suggest that for the purpose of assessing currency-specific market depth and liquidity, principal exchange markets (PEMs) are best understood in terms of three broad time zones—corresponding roughly to the Asian, European, and North American market hours—rather than geographical market locations.² In light of the requirement for a currency to be widely traded in multiple, but not necessarily all, PEMs, this could lend itself to the interpretation that members need to be reasonably assured of sufficient market depth in at least two of the three time zones.

The role of electronic trading platforms in FX trading has risen rapidly. According to the 2013 BIS Triennial Survey, these platforms now constitute a majority of global FX turnover, at 57 percent, compared to just 41 percent three years prior (surveys before 2010 did not report electronic trading separately).³ Furthermore, discussions with market participants suggest that trades executed via other methods frequently make reference to quotes from an electronic platform in setting the terms of the transaction.

This has weakened the link between the market in which a transaction is booked and the location of the transacting parties. Electronic trading allows for continuous multilateral interaction by different market participants, rendering less relevant the common physical location of users by allowing users in different locations to connect to the electronic system and interact as if they were in a common location.⁴ The location where the trade is booked depends on the broker-dealer executing the trade, which does not necessarily correspond with that of either of the participants in the underlying transaction (see text box).

² The concept has previously only been considered in the context of the first freely usable assessment in 1977–78, when it was determined sufficient to consider currencies traded in the London, New York and Frankfurt markets.

³ Until the mid-1990s, most interbank dealing was done over the telephone, with conversations recorded and later confirmed by mail, telex, or fax. Today FX trading relies on any of a wide array of electronic networks, such as *Thomson Reuters, Electronic Brokerage Services* (EBS), single-bank proprietary trading systems, or other electronic communication networks, which allow trading at any time without regard to location.

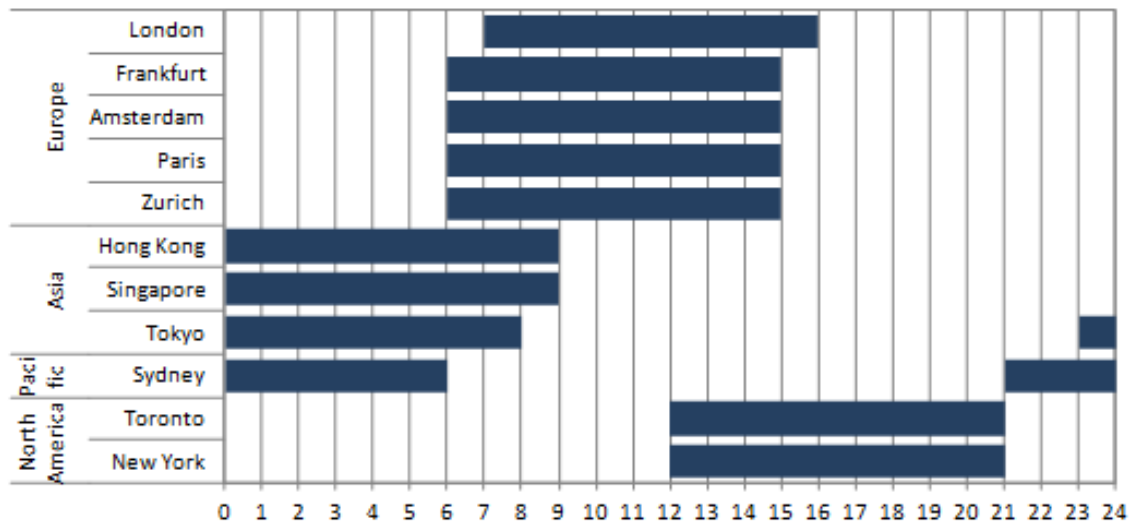
⁴ See Committee on the Global Financial System, 2001, “The implications of electronic trading in financial markets.” Available at: <http://www.bis.org/publ/cgfs16.pdf>.

Illustration of the impact of electronic trading on FX market integration

The following example illustrates the impact of electronic trading on FX market integration. If a fund manager wants a quote to exchange currency, the manager could request competing quotes from several dealers with whom the fund has an account. The dealers, who could be in any of a number of locations trading at that time of day, would provide a quote guided by what they see on the electronic platform (for example, EBS or Reuters) and could execute the trade either on the electronic platform, from their own inventory, or through matching the order with that of another client. The electronic platform displays a quote of the best bid or offer at the time, regardless of the dealer from which it comes. The location booked for the trade depends on the location of the dealer used in the transaction. Thus, multiple locations function as if part of a single market.

The innovations in market infrastructure have helped transform FX trading into a round-the-clock market. At almost any point in time, FX trading is active in at least one time zone (Figure 1).⁵ Major market participants pass their trading book to whatever location is active at that time, facilitating liquidity in FX trading. At the same time, trading volumes, liquidity and spreads remain strongly correlated with the operating hours of major financial markets, where many FX dealer desks, the major electronic platforms and other FX market liquidity providers are located,

Figure 1. Illustrative FX Market Trading Hours (GMT)



Source: National sources.

These developments suggest that for the purpose of assessing “widely traded”, PEMs could be interpreted to be broad time zones as opposed to specific market locations. In light of the requirement for a currency to be widely traded in multiple, but not necessarily all, PEMs, this could lend itself to the interpretation that members need to be reasonably assured of sufficient market depth in at least two of the three time zones. However, the degree of market depth should be

⁵ Activity generally hits a low point in the brief period between the close of the North American business day until the open of the Asian business day.

interpreted together with the need for “reasonable assurance”. This assurance takes into consideration that the depth and liquidity of any PEM, i.e. market time zone, naturally fluctuates intraday; hence, executing a similar FX transaction at different times may well have a different price impact.

Nowhere is the relevance of the market time zone concept more important than in Asia. In the European and North American time zones markets are more concentrated in London and New York, while in Asia markets are more dispersed, with Singapore, Hong Kong SAR, and Tokyo serving as the leading markets. However, the advent of electronic trading allows market participants to function as if these multiple locations constituted a single market.

Data from the EBS electronic trading platform suggests that RMB trading is most liquid during the hours the Asian market is open, which includes the first half of the European trading day. It then becomes more modest in the last few hours of European trading and is very low from the close of the European market to the open of the Asian market. RMB volumes have increased substantially since 2013 driven by the rising internationalization of the RMB, and also reflecting in part the increasing market share of the EBS platform over this period.

Annex III. The Role of Hong Kong SAR as a Global Financial Center: Implications for Freely Usable Assessment

Hong Kong's status as a special administrative region (SAR) of China and its character as a global financial center (GFC) raise issues for the assessment whether the RMB is a freely usable currency. Under the existing legal framework, RMB transactions within Hong Kong SAR and between Hong Kong SAR and the Mainland are not treated as international transactions for purposes of assessing the international use of the RMB (Box 1).⁶ However, this could result in an underestimation of the international use of the RMB if a significant part of RMB transactions within Hong Kong SAR are attributable to international transactions as they are either undertaken between non-residents or to settle an international transaction from a third country. The relevance of this issue has to be assessed on an indicator-by-indicator basis and may require further work.

Owing to its unique position as an SAR of China and a GFC, Hong Kong SAR has served as a centerpiece of the Chinese authorities' RMB internationalization strategy. Initial steps included allowing Hong Kong SAR banks to offer RMB-denominated personal accounts to residents in November 2003, followed in December 2003 by the establishment of a clearing bank arrangement to facilitate RMB payments with the Mainland. Subsequent measures included authorization of the offshore use of RMB for cross-border trade invoicing and settlement, the first offshore issuance of RMB-denominated bonds in Hong Kong SAR by the Chinese Ministry of Finance, and permission for mainland financial institutions and corporates to issue RMB-denominated bonds offshore. These initiatives expanded rapidly, and have been complemented more recently by liberalization of RMB use for settling direct investment payments and both inward and outward portfolio investment flows, including through the Shanghai-Hong Kong Stock Connect and other channels.

Several factors lead RMB transactions to be conducted through Hong Kong SAR rather than directly between the rest of the world and the Mainland. The authorities' intentional use of Hong Kong SAR as a platform for RMB internationalization facilitated the development of deep and liquid offshore (CNH) foreign exchange and money markets there. Chinese firms tend to be significant net suppliers to the CNH market, as in the presence of capital controls retaining receipts offshore provides more flexibility than repatriating the funds to the Mainland. This, in turn, leads international firms to obtain RMB in Hong Kong SAR, and many regional corporate treasuries are located there. The pool of CNH market makers is also deep, as the Hong Kong Monetary Authority (HKMA) has designated seven primary liquidity providers that have pledged to expand their market-making activities in Hong Kong SAR for various CNH instruments, and use the Hong Kong SAR platform in promoting their global offshore RMB business.⁷ Finally, the HKMA has put in place an RMB Real-Time Gross Settlement system, which by its linkage with the Mainland's National Advanced Payment System allows banks from all over the world to handle RMB transactions with

⁶ Similar considerations also apply to Taiwan Province of China and Macao SAR.

⁷ Similar arrangements exist in other centers with clearing banks but are limited to specific cross rates (e.g. in Singapore, SGD/CNH but not USD/CNH).

the Mainland while eliminating settlement risk. Payments through the system reached the equivalent of some \$140 billion per day by the end of 2014. About 10 percent of these payments were cross-border flows between Hong Kong SAR and the Mainland, while the rest were offshore transactions.

Since RMB transactions involving Hong Kong SAR are so common, their treatment as either domestic or international could have a considerable impact on the assessment of the international use of the RMB. The primary role of Hong Kong SAR reflects its strong economic and cultural ties to the Mainland and first-mover advantages as well as its efficiency as a GFC and the intentions of the Chinese authorities. Despite the establishment of 16 other offshore RMB clearing centers, Hong Kong SAR accounts for over sixty percent of payments between all clearing centers and the Mainland, half of offshore foreign exchange turnover, half of offshore RMB-denominated deposits, and ninety percent of approved investment in the Mainland of offshore RMB under the Renminbi Qualified Foreign Institutional Investor (R-QFII) program. Thus, it is possible that treating transactions involving Hong Kong SAR as domestic could affect the reported international use of the RMB to a greater extent than similar treatment of other GFCs would affect other currencies.⁸

The relevance of these issues will depend on the specific indicator in question. For example, while SWIFT data show that cross-border payments in RMB are fairly modest, including third-party domestic use boosts the RMB's share of total payments (Annex V, Table 1).⁹ This implies that a significant proportion of RMB-denominated payments are between parties in Hong Kong SAR (or potentially also in Macao SAR or Taiwan Province of China). Including all RMB-denominated payments would certainly overstate the international use of the RMB due to transactions between residents of Hong Kong SAR, Macao SAR, and Taiwan Province of China and residents of the Mainland that are not related to an international transaction. Conversely excluding all these transactions would probably understate the RMB's international use. Unfortunately, it is not possible to distinguish the rationale for each transaction in the cross-border payments data. For foreign exchange turnover, the treatment of Hong Kong SAR, Macao SAR, and Taiwan Province of China would not have any impact on the indicator since foreign exchange transactions in all markets would be considered in the indicator, provided that non-residents have access.

Overall, the discussion above suggests an indicator-by-indicator approach to the treatment of Hong Kong SAR, Macao SAR, and Taiwan Province of China, which will require further analysis. This would include an assessment of the factors driving RMB use between the Mainland and Hong Kong SAR, Macao SAR, and Taiwan Province of China, as well as among these three, and its link to transactions with other members, as well as efforts to improve data availability. Staff will also look at the issue of non-resident use of foreign currency in other financial centers, including London, to examine whether such transactions could have similar links to international transactions.

⁸ While similar considerations would in principle also apply to other GFCs, in practice they could be more important in the case of Hong Kong SAR, given that the infrastructure for direct transactions with Mainland China is less developed—and thus provides less risk mitigation and is more costly— than the financial infrastructure in the host countries of other GFCs.

⁹ See Annex V for a detailed discussion of the different categories of SWIFT payments messages.

Annex IV. Renminbi Internationalization

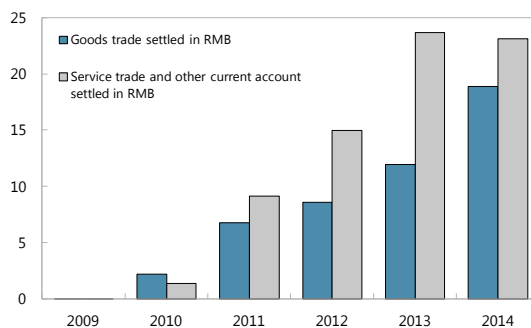
The use of RMB in cross-border payments and its status as an actively traded currency in global financial markets have both grown rapidly in recent years, as discussed in the main paper. This annex takes stock of the key developments in the offshore use of the RMB and underlying policy measures that have promoted its internationalization.

A. Offshore use of RMB—key developments

RMB trade settlement. The use of RMB for cross-border trade invoicing and payment has grown rapidly since its introduction in 2009. Close to 20 percent of China's goods trade is now settled in RMB (and almost 25 percent of other current account transactions—services, income and dividend payments). Among factors cited for the rapid rise are the mutual benefits—better pricing for non-resident buyers, more security against currency risk for Chinese entities, more efficient cash flow management and lower transactions costs for both sides.

Cross-border RMB Settlement

(In percent of total trade)



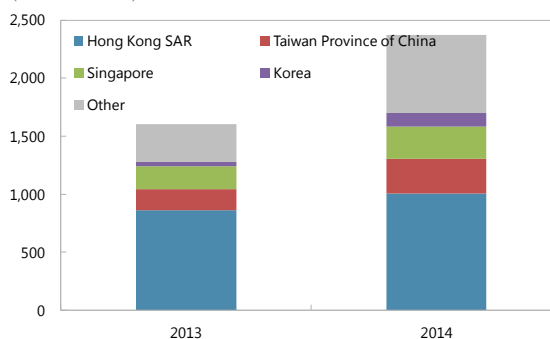
Sources: CEIC; and IMF staff calculations.

RMB direct investment settlement. Since 2011, direct investment payments (inward FDI and outward ODI) have been permitted in RMB. The RMB is rapidly advancing as the currency of choice for settling direct investment payments in both directions. Close to 30 percent of FDI transactions were settled in RMB in 2014, up from 13 percent in 2012. Reflecting a growing willingness of non-resident counterparties to accept RMB in settlement, close to 16 percent of China's ODI is now settled in RMB, up from just 4 percent in 2012.

Offshore RMB Deposits. Licensed banks in Hong Kong SAR began accepting RMB deposits in February 2004, initially primarily to support Mainland tourism and remittances. The pace of accumulation began to accelerate after cross-border trade settlement in RMB was permitted in 2009, driven by corporate deposit growth. Offshore RMB deposits have grown close to RMB 2 ½ trillion (from around RMB 100 billion in 2010), of which just under half is in Hong Kong SAR. Singapore, Taiwan Province of China, and Korea have also seen a build-up of RMB deposits in recent years (Chart). The overall offshore deposit base is around just over 1½ percent of onshore deposits.

Offshore Deposits in RMB

(In billions of RMB)

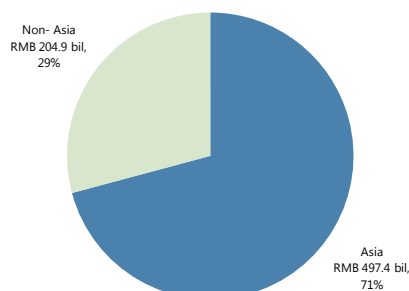


Sources: CEIC; and IMF staff calculations.

Offshore RMB bonds. The issuance of offshore RMB bonds was initially restricted to Mainland policy and commercial banks, starting with China Development Bank listing in July 2007 in Hong Kong SAR. China’s own sovereign issuance in Hong Kong SAR has been an important driver of the market, with the first auction taking place in September 2009. Several corporate issuers have also tapped RMB funds in the offshore market, including foreign companies such as McDonald’s, Volkswagen and Caterpillar. Issuance activity has since spread, including to centers outside Asia such as London, where the first RMB-denominated bond was issued in April 2012 by HSBC.

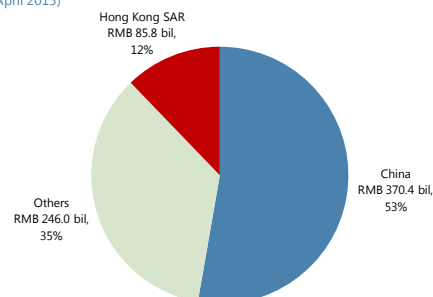
- *Current size.* As of April 2015, outstanding offshore RMB bonds including certificates of deposit stood at RMB 702 billion (around 2¼ percent of the onshore bond market).
- *The bulk of bonds are issued by entities from China and Hong Kong SAR.* 65 percent of outstanding bonds are accounted for by issuers incorporated in China and Hong Kong SAR. A further 6 percent is accounted for by other Asian issuers and the remaining 29 percent by non-Asian entities (Figure).

Outstanding Offshore RMB Issuance by Location of Issuer
(As of April 2015)



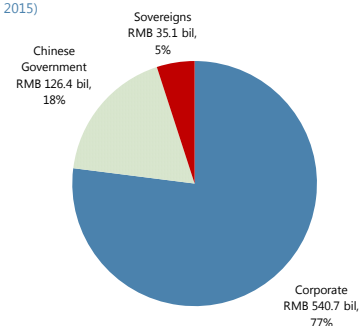
Sources: Bloomberg; and IMF staff estimates.

Outstanding Offshore RMB Issuance by Location of Issuer
(As of April 2015)



Sources: Bloomberg; and IMF staff estimates.

Outstanding Offshore RMB Issuance by Sector
(As of April 2015)



Sources: Bloomberg; and IMF staff estimates.

- *Corporate credits dominate* the sectoral breakdown, accounting for 77 percent of outstanding issuance (of which just over half—or around 40 percent of total issuance—is by Chinese state-owned banks and enterprises). Chinese government and policy banks comprise about 18 percent of the issuances. The remaining 5 percent of issuances is by supra-national bodies and foreign governments.
- *Overseas agencies and governments have also been tapping offshore RMB funds in recent months.* In September 2014, the IFC issued what was then the largest London-listed RMB bond worth RMB 1 billion. In October 2014, the UK issued its first RMB-denominated

sovereign bond (raising RMB 3 billion) and indicated that the proceeds would be held as FX reserves. A month later, the Canadian province of British Columbia issued in Hong Kong SAR its second RMB-denominated bond for RMB 3 billion.

- *Instruments that allow hedging of interest rate and currency risk have accompanied the growth of the offshore debt market.* Market participants note rapidly growing volumes in cross currency swaps (CCS) involving offshore RMB and the emergence of the CCS curve as a key offshore RMB benchmark interest rate curve.

Foreign asset holdings in RMB. Sparse data on central bank holdings of RMB-denominated assets precludes a definitive judgment of how widespread the practice is. As of April 2015, the People’s Bank of China (PBC) estimates the total offshore holding of bonds, stocks, deposits and other RMB assets by foreign central banks and monetary authorities amounted to RMB 666.7 billion.—just over USD 100 billion.

Overall progress. Most of the progress in RMB internationalization since 2009 has been in its use for trade settlement and direct investment purposes. The use of the RMB as an international funding and reserve currency, while growing, remains in its early stages.

B. Underlying Policy measures to Promote RMB Internationalization

Policy measures to promote RMB internationalization, particularly its use as a funding and investment currency, have covered three main areas: gradual opening of the capital account, steps to strengthen the domestic financial system, and offshore liquidity support through improvements to cross-border payments infrastructure and central bank swap lines.

Gradual opening of the capital account

Capital account transactions with China are generally subject to restrictions, pre-approvals, and quotas, as summarized in the Fund’s 2014 AREAER report. As part of a broader financial reform agenda, however, over time the authorities have been gradually easing restrictions, widening channels of access, and increasing quotas for two-way flows (for example, the USD “Qualified Foreign Institutional Investor—QFII” program, established in 2003, that allows foreign asset managers access to the Mainland securities markets and the USD “Qualified Domestic Institutional Investor—QDII” program, established in 2006, through which Chinese asset managers can invest in overseas securities markets, both subject to approval and quotas).

Toward a regime of “managed convertibility”. More generally, steps have been taken to facilitate cross-border transactions through reducing the costs associated with regulatory approval. For certain direct investment transactions in the capital account, the regulations have already shifted from pre-approvals to registration and ex-post monitoring. The State Administration of Foreign Exchange (SAFE) tracks each transaction and follows up with banks on aberrant transfers. Recent discussions with the authorities indicate that capital account liberalization will proceed along a path of “managed convertibility”. Details have not been announced, but staff understands that the broad

rationale is to minimize disruptive short-term capital flows and contain currency and duration mismatches. The approach will likely:

- combine the monitoring system for direct investment transactions with licensing and approvals for securities and loan transactions within an aggregate quota (the eventual goal is to shift all transactions from approvals to monitoring);
- monitor transactions in as real time as possible, and take action if necessary to contain potentially harmful, destabilizing flows (macro prudential and capital flow measures);
- maintain limits on open foreign positions and short-term external debt (micro prudential); and
- exercise tight supervision to curb money laundering, terrorist financing, and tax evasion.

In addition to encouraging private flows, the authorities are taking steps to ease access to onshore markets for overseas official institutions. On July 14, the authorities announced that foreign central banks (as well as sovereign wealth funds and international financial institutions) registered with the PBC can choose their own size of investment in the onshore China Interbank Bond Market (CIBM), with access to all instruments including repos, bond lending, bond forwards, interest rate swaps, and forward rate agreements. The guidelines permit these overseas official institutions to select either the PBC or a settlement agent registered with the PBC to conduct trading and settlement on their behalf. Once fully implemented, these measures are likely to ease access to onshore financial markets for overseas official institutions. As outlined in the guidelines, however, these institutions shall act as long-term investors and the PBC will regulate their trading behavior in accordance with reciprocity principles and macroprudential requirements.

Against the backdrop of a gradual opening of the capital account, non-resident interest in RMB as a funding and investment currency has been helped by specific steps to allow RMB funds to flow onshore.

- The ‘**Renminbi Qualified Foreign Institutional Investor (R-QFII)**’ program, introduced in 2011, allows foreign asset managers to channel offshore RMB funds into the Mainland securities markets, subject to approval from two agencies: a license from the China Securities Regulatory Commission (CSRC) and a quota from SAFE. Market participants note that restrictions on remittances of dividends, minimum holding periods, and ‘soft’ barriers to holding cash onshore deter entry (around 50 percent of overall approved quotas have been used). Nevertheless, familiarity with market conditions seems to mitigate these obstacles in some cases (the Hong Kong SAR R-QFII quota has been fully taken up).
- Since November 2014, individuals and institutional investors with a brokerage account in Hong Kong SAR can trade stocks on the Shanghai stock exchange under the North-bound corridor of the ‘**Shanghai-Hong Kong Stock Connect**’ scheme, while a South-bound corridor permits trades in the reverse direction (Hong Kong SAR stocks traded via a Shanghai brokerage account). Although take-up from Hong Kong SAR has been significant (around 50 percent of the RMB 300bn North-bound quota has been used as of May 2015), lack of clarity on the legal framework governing ownership and voting rights for onshore

stock appears to have so far deterred participation by large international institutional investors. Plans are underway, however, to expand the Connect program to cover Shenzhen by the end of the year.

- More recently, in May 2015, the PBC announced that offshore clearing banks as well as nonresident banks with quotas to access the CIBM can borrow in the **onshore interbank repo market** to fund offshore RMB business. The limit on financing secured through repos will be tied to the bonds held onshore. Greater access to the onshore market should enhance the efficiency of offshore RMB liquidity management, facilitate participation in Stock Connect schemes and offshore issuance of RMB securities, and advance the cross-border use of RMB more generally.
- In July 2015, a new channel for two-way flows between Hong Kong SAR and the Mainland (**“Mutual Recognition of Funds”**) will open with mutual funds in either location permitted to mobilize investments from the other jurisdiction, subject to regulatory approval and within an overall quota.
- **Measures to facilitate regional corporate treasury operations.** Since February 2014, corporations registered in the Shanghai Free Trade Zone have been allowed onshore-offshore RMB and USD cash transfers between the parent company, subsidiaries, and affiliates. In November 2014, the program was extended to corporations registered in pilot cities across the country. These ‘cash pooling’ or ‘cash sweeping’ arrangements are intended to help corporations centralize and standardize risk management, debt service, and working capital transfers.

Domestic Financial Reforms

The international appeal of RMB securities ultimately rests on the stability of the domestic financial system (along with other attributes such as overall macroeconomic performance and access to information on corporate issuers). As part of their broader structural reform agenda to transition China to a safe and sustainable growth path, the authorities have initiated financial reforms aimed at achieving more market-based pricing, better alignment of risks with returns, and greater efficiency of credit allocation. Key elements include:

- **Interest rate liberalization.** Over the last decade, the PBC has gradually dismantled controls over commercial bank interest rate settings. Lending rates were completely liberalized in 2013. Deposit rates are still guided by a benchmark set by the PBC, but since 2012 commercial banks have been given greater control over pricing deposits through an increasingly wider band of flexibility above the benchmark (currently set at 1.5x). In June, 9 large banks were permitted to issue negotiable certificates of deposits to households and nonfinancial corporations at ‘market rates’, subject to an annual target balance quota.
- **Deposit insurance.** A nation-wide deposit insurance program was established on May 1. It covers all deposit-taking banking institutions, excluding branches of foreign banks. Deposits up to RMB 500,000 (\$80,600) per depositor per bank are insured, which covers 99.6 percent of depositors.

- **Measures to rein in shadow banking.** Over the last two years, the authorities have taken steps to tighten regulation and supervision of securities and trust companies, activity in the interbank market, issuance of high yield ‘wealth management products’, and lending to high risk sectors of the economy. These measures appear to have had an impact on the composition of credit: the share of intermediation that has been brought back on to bank balance sheets (and is therefore subject to capital and provisioning requirements) has increased significantly in recent months, while off-balance sheet activity has decelerated sharply.

Cross-Border Payments Infrastructure and Offshore Liquidity

Since 2003, the PBC has designated 17 overseas subsidiaries or branches (hereafter referred to as “clearing banks” of the Chinese banks in the Mainland to provide RMB settlement services (Table 1). The settlement institutions of their clearing systems are participants in China’s real-time gross settlement system and intermediate the exchange of RMB against foreign currencies, between offshore and onshore banks.

Clearing banks have a settlement account with the PBC and have access to RMB liquidity from the PBC or through their headquarters in China. In addition, they have access to the onshore inter-bank lending and bond market, and the foreign exchange market. They thus provide liquidity to the offshore markets, while also allowing the PBC to monitor the RMB flows.

A new RMB Cross-border Interbank Payment System (CIPS) is expected to be launched later this year. The system will adopt real-time gross settlement for cross-border trade, cross-border direct investment and other cross-border RMB business settlements. The new payment system is intended to improve the efficiency of RMB clearing and settlement and thereby support wider international use of the currency.

Table 1. Offshore RMB Clearing Banks

Location	Date Established	Clearing Bank
Hong Kong SAR	Dec-03	Bank of China (HK) Corp. Ltd
Macao SAR	Sep-04	Bank of China Macao Branch
Taiwan Province of China	Dec-12	Bank of China Taipei Branch
Singapore	Feb-13	Industrial and Commercial Bank of China Singapore Branch
United Kingdom	Jun-14	China Construction Bank (London) Corp. Ltd
Germany	Jun-14	Bank of China Frankfurt Branch
Korea	Jul-14	Bank of Communications Seoul Branch
France	Sep-14	Bank of China Paris Branch
Luxembourg	Sep-14	Industrial and Commercial Bank of China Luxembourg Branch
Qatar	Nov-14	Industrial and Commercial Bank of China Doha Branch
Canada	Nov-14	Industrial and Commercial Bank of China (Canada) Corp. Ltd
Australia	Nov-14	Bank of China Sydney Branch
Malaysia	Jan-15	Bank of China (Malaysia) Corp. Ltd
Thailand	Jan-15	Industrial and Commercial Bank of China (Thailand) Corp. Ltd
Chile	May-15	China Construction Bank Chile Branch
Hungary	Jun-15	Bank of China (Hungary)
South Africa	Jul-15	Bank of China Johannesburg Branch

Source: PBC.

Bilateral swap lines provide a liquidity backstop to counterpart central banks. Since 2008, the PBC has signed bilateral swap lines with over 30 foreign central banks, cumulatively worth over RMB 3 trillion (Table 2). The PBC notes that the purposes of each bilateral currency swap arrangement include promoting bilateral trade and direct investment for economic development of the two countries, supporting domestic financial market stability, and other purposes agreed upon by both parties. Though the purpose of foreign exchange intervention is not explicitly included, a counterpart can convert RMB into other currencies in the offshore market and use the funds for purposes it deems appropriate. Swap agreements are effective for a three year period from the effective date of agreement and the drawing / usage period is up to 12 months. The RMB leg of the swap is priced off SHIBOR as the benchmark rate, with the spread over the benchmark priced according to the counterpart's credit rating, credit default swap spread, and other factors. The PBC does not provide an implicit agreement to convert RMB into a major reserve currency.

Table 2. PBC Bilateral Swap Lines with Foreign Central Banks and Monetary Authorities

Country	Size (in billions of RMB)	Start Date	Duration
Total (32)	3159		
Asia (13)	1678		
Hong Kong SAR	400	27-Nov-14	3 Years
Korea	360	11-Oct-14	3 Years
Singapore	300	7-Mar-13	3 Years
Australia	200	8-Apr-15	3 Years
Malaysia	180	18-Apr-15	3 Years
Indonesia	100	1-Oct-13	3 Years
Thailand	70	22-Dec-14	3 Years
New Zealand	25	25-Apr-14	3 Years
Mongolia	15	21-Aug-14	3 Years
Pakistan	10	23-Dec-11	3 Years
Sri Lanka	10	16-Sep-14	3 Years
Kazakhstan	7	14-Dec-14	3 Years
Uzbekistan	0.7	9-Apr-11	3 Years
Other (19)	1482		
European Central Bank	350	9-Oct-13	3 Years
United Kingdom	200	22-Jun-13	3 Years
Canada	200	8-Nov-14	3 Years
Brazil	190	26-Mar-13	3 Years
Russia	150	13-Oct-14	3 years
Switzerland	150	21-Jul-14	3 years
Argentina	70	18-Jul-14	3 Years
United Arab Emirates	35	17-Jan-12	3 Years
Qatar	35	3-Nov-14	3 Years
South Africa	30	10-Apr-15	3 Years
Chile	22	25-May-15	3 Years
Ukraine	15	15-May-15	3 Years
Turkey	10	21-Feb-12	3 Years
Hungary	10	9-Sep-13	3 Years
Belarus	7	10-May-15	3 Years
Iceland	3.5	11-Sep-13	3 Years
Albania	2	12-Sep-13	3 Years
Suriname	1	18-Mar-15	3 Years
Armenia	1	25-Mar-15	3 Years

Source: PBC.

C. Summary

RMB internationalization began to accelerate in 2009, principally through the offshore market in Hong Kong SAR. The status of the RMB as a payment currency for settling China's cross-border trade and direct investment transactions has advanced rapidly. However, its use as an international funding and reserve currency remains in the early stages. As part of broader reforms aimed at moving China onto a sustainable growth path, the authorities have gradually opened the capital account and introduced measures to strengthen the domestic financial system. Together with efforts to expand cross-border payments infrastructure, the reforms are also aimed at enhancing the international appeal of RMB securities.

Annex V. Data Issues Pertaining to the Freely Usable Currency Assessment

This annex presents definitions, data sources, and methodological issues relating to indicators used in the assessment of “Freely Usable”. The first section recounts the four indicators endorsed by the Executive Board in 2011. International bank liabilities and international debt securities, two of the three Board-endorsed indicators for widely used, have undergone methodological changes in definition since then. It also describes complementary sources of data for foreign exchange turnover, the Board endorsed indicator for widely traded. In the second section, data sources and issues relating new indicators proposed by staff for assessing free usability are discussed.

A. Board-endorsed Indicators (2011)

Official foreign exchange reserves: The Currency Composition of Official Foreign Exchange Reserves (COFER) database provides data on the currency composition of official foreign exchange reserves on a quarterly basis. COFER provides break-downs for seven currencies representing 97 percent of allocated global reserves but it does not separately identify the RMB.^{10, 11}

International banking liabilities (IBL): They are defined by the BIS as liability positions denominated in any currency to non-residents (Locational Banking Statistics, Table 5A, external positions vis-à-vis all sectors) plus liabilities denominated in foreign currency to domestic residents (Locational Banking Statistics, Table 5D, local position in foreign currency vis-à-vis all sectors and vis-à-vis the non-bank sector). Currently the BIS require reporting the currency breakdown into local currency, each of the SDR currencies, the Swiss franc and the residual. The full breakdown is encouraged but not required. The BIS, on its part, is assessing whether information on the RMB-denominated liabilities of banks resident in Hong Kong SAR, Macao SAR, and Taiwan Province of China to residents of mainland China can be provided.

IBL statistics from BIS was endorsed as an indicator for freely usable by the Executive Board in 2011. In December 2012, the BIS changed its methodology for compiling data on international banking positions. Previously, reporting banks’ positions, denominated in either foreign or local currency, for which the counterparty was unknown had been treated as “external or cross-border”. After the revision, a new category “unallocated by counterparty country” captured unallocated positions denominated in foreign currency. Positions unallocated by counterparty country in local currency were removed from external positions.

The difference in external banking liabilities resulting from the methodological change is

¹⁰ The share of unallocated reserves (i.e., those of non-reporting jurisdictions) has increased to relatively large 47.5 percent from 44.3 percent and 34.2 percent in 2010 and 2005, respectively. STA is reaching out to those jurisdictions to increase the coverage of COFER. If the number of countries reporting increase overtime, the share of unallocated reserves would decline, affecting the currency shares.

¹¹ See *BPM6* 6.64, 6.69, and 6.72 for the definition of reserve assets used in the COFER survey.

measurable, reflecting the removal of positions in local currency for which the country counterparty was unknown, mainly debt securities issued by banks (hence affecting liability positions more greatly than assets). As compared to the BIS data from 2010 included in the 2010 review, the value of liability positions declined on average by about 10 percent over the period with the revised data in 2013. Importantly, the distribution of the change between currencies was relatively even, with the US dollar and euro gaining some share.

International debt securities (IDS): BIS international debt securities are defined as bonds and notes and money market instruments issued in a market other than the local market of the country where the borrower resides (Securities Statistics, Tables 13A and 13B). They encompass what market participants have traditionally referred to as foreign bonds and eurobonds. Foreign bonds are issued by non-residents under the registration rules of a local market. Eurobonds, also known as offshore bonds, are issued outside the registration rules of any local market, usually in a foreign currency. The BIS compiles data on international debt securities from various national, market, and institutional data sources such as Dealogic, Thomson Financial Securities Data International Capital Market Association, the Bank of England, and Euroclear. The BIS is exploring whether it would be possible to consolidate Hong Kong SAR, Macao SAR, and Taiwan Province of China with mainland China in compilation of RMB-denominated IDS.

Prior to 2012, the BIS definition of an international debt security was based on targeted investor rather than the primary market i.e. the market where securities are issued for the first time. It covered debt securities placed with international investors, including securities issued in the local market by local residents but targeted at international investors.¹² Therefore, they reflected an estimate for the external indebtedness of a country.

The methodological revision meant a significant reduction in the outstanding stock of international debt securities and significant reallocation of currency shares. The value of the outstanding issuances fell by 27 percent at end-September 2012 and on average 20 percent in 2005–09, the period covered by the 2010 review. Almost all of this reduction is explained by the reclassification as domestic bonds of local currency bonds issued by residents in the local market but underwritten by a syndicate that included at least one foreign bank. A small amount is also explained by the reclassification as domestic of debt securities issued by residents in the local market but denominated in foreign currencies. The redistribution of the currency shares is more significant, with the share of issuances denominated in US dollar experiencing a large downward revision while other currencies—particularly the euro and pound—gaining.

Foreign exchange turnover: This is defined as the gross value of all deals concluded during the month, and is measured in terms of the nominal or notional amount of the contracts based on the location of the sales desk. The BIS Triennial Central Bank Survey is the only comprehensive and

¹² Debt securities issued in the local market by local residents were regarded by the BIS as being targeted at international investors if they were either denominated in a foreign currency or underwritten by a syndicate that included at least one foreign bank.

reliable data source for global foreign exchange market turnover. The survey compiles the nominal or notional amounts of executed spot and derivative foreign exchange transactions from about 1300 reporting financial institutions from 53 jurisdictions.¹³ However, it is conducted only once every three years for the month of April. The latest available one dates back to April 2013, failing to capture most recent market developments, including the continued increase in Chinese RMB turnover. Furthermore, the survey covering only a one-month snapshot may affect cross-currency comparisons by capturing any exceptional currency-specific volatility.¹⁴

Higher frequency local surveys by regional foreign exchange committees and monetary authorities may complement the BIS Triennial Survey with more up-to-date information. Six regional committees (London, New York, Singapore, Tokyo, Australia and Canada) covering roughly 75 percent of global market turnover publish survey results on a semi-annual basis, while the Hong Kong Monetary Authority and People's Bank of China have provided the IMF with local foreign exchange turnover on a monthly basis for the purpose of the SDR review. These surveys are broadly underpinned by similar methodology as used for the Triennial Survey, but are not as comprehensive and typically have limitations to the currency pairs covered. In absence of coordination by the BIS, turnover statistics from local surveys cannot be adjusted for double-counting of cross-border trades reported by dealers in different jurisdictions (data is compiled on net-gross basis).¹⁵

Data compiled by Society for Worldwide Interbank Financial Telecommunication (SWIFT) provides a potential complementary high-frequency source for foreign exchange volumes. The turnover data is based on inter-institution back office messages for confirming details of a foreign exchange transaction in SWIFT's FIN messaging service network (Message Type 300) from SWIFT's FIN network. Unlike survey-based data, SWIFT data is based on actual interaction between market participants and can be obtained at a high (monthly) frequency. However, SWIFT data broken down by instrument or by the market where the trade was booked are not available, which would have been relevant for the purposes of the freely usable assessment. The data records both legs of FX swaps as separate spot transactions, which exaggerates the actual market depth for each currency involved in swaps. Importantly, the data covers only part of the global FX market. Some FX trades are confirmed outside the SWIFT network (through smaller alternative networks or non-automated processes) and a significant portion of trades in the 17 currencies settled by the CLS are confirmed through an alternative SWIFT messaging service (InterAct), which is separate from the FIN network and is not included in the data. This, in turn, significantly skews cross-currency turnover comparisons in favor of non-CLS currencies. There may be further data quality issues related to the degree of "noise": for example, messages with no underlying foreign exchange transactions or typos cannot be filtered out in compiling the data set. Staff will explore possible remedies to some of these issues and assess feasibility of using SWIFT data for purposes of the free usability assessment.

¹³ For more information, visit: <http://www.bis.org/publ/rpfx13.htm>.

¹⁴ The BIS highlights issues related to currency-specific volatility as part of the data publication.

¹⁵ Regional surveys do net out reporting of same trades by local dealers and therefore record turnover on "net-gross" basis (adjusted only for local but not for cross-border double counting).

Additional surveys conducted by specific markets

Financial center	Data	Latest data	Market size 1/ 2/		Data availability (total and by currency) 3/									
			USD bn	%	Total	USD	EUR	JPY	GBP	RMB	AUD	CHF	CAD	
London	Public	Oct 14	2667	41%	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
New York	Public	Oct 14	1095	17%	Green	Orange	Orange	Orange	Red	Orange	Orange	Orange	Orange	Orange
Singapore	Public	Oct 14	481	7%	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Tokyo	Public	Oct 14	363	6%	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Hong Kong SAR 4/	Bilateral	Apr 15	275	4%	Red	Red	Red	Red	Yellow	Red	Red	Red	Red	Red
Sydney	Public	Oct 14	150	2%	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Toronto	Public	Oct 14	60	1%	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Mainland China	Bilateral	Apr 15	44	1%	Red	Red	Red	Red	Yellow	Red	Red	Red	Red	Red

Source: BIS, Triennial Central Bank Survey; London Foreign Exchange Joint Standing Committee; New York Foreign Exchange Committee; Singapore Monetary Authority; Tokyo Foreign Exchange Market Committee; Hong Kong Monetary Authority; Australian Foreign Exchange Committee; Canadian Foreign Exchange Committee; and People's Bank of China.

1/ Size of the market is based on BIS Triennial Survey, April 2013 or the latest available figure. Percentage is relative to net-gross global total for BIS April 2013 Triennial Survey, adjusted for the latest available data.

2/ Adjusted for local but not for cross-border inter-dealer double counting (net-gross basis).

3/ Color coding: Green signifies data is available and public; Orange signifies data is available and public for only some currency pairs; Yellow signifies data has been provided to the IMF bilaterally; Red signifies data is not available.

4/ Total turnover for Hong Kong SAR is based on April 2013 BIS Triennial Survey.

B. New proposed indicators

Survey on the use of Currencies in Official Foreign Currency Assets: The IMF conducted an ad-hoc survey of member countries on the use of currencies in official foreign currency assets. The survey asked for a by-currency breakdown for a selected set of currencies. Official Foreign Currency Assets include Monetary Authorities' holdings of both Official Reserve Assets and other foreign currency assets (both claims on non-residents and residents) not included in official reserve assets. The ad-hoc survey was conducted during April–May, 2015, and requested end-position data for end-2013 and end-2014.

Monetary Authorities encompass the central bank and certain operations usually attributed to the central bank but sometimes carried out by other government institutions or commercial banks. In cases where monetary authorities included institutions other than the central bank, the survey was sent to both the central bank and the agency managing reserves. The broader definition of official foreign currency assets allowed members to report the currency composition of all assets denominated in foreign currencies.

The ad-hoc survey targeted the full membership of the Fund, and it was reported on a voluntary and confidential basis by 130 jurisdictions. Following the guidelines of the quarterly survey of the Currency Composition of Official Foreign Exchange Reserves (COFER), the ad-hoc survey information was treated as strictly confidential, as only four staff at the Fund had access to individual country data. The information on individual members is not disseminated or published. The names of the jurisdictions that reported are also confidential, consistent with the COFER guidelines.

Gross issuance of international debt securities: Gross issuance of international debt securities from BIS covers same markets, instruments and methodology as outstanding international debt

securities, a 2011 Board-endorsed indicator. As for IDS, the BIS data currently does not allow for consolidating issuance of Hong Kong SAR, Macao SAR, and Taiwan Province of China with that of mainland China.

Trade finance: Trade finance comprises financial transactions aimed at supporting international trade, involving credit, insurance or guarantees. The financing can be accorded directly between importers and exporters (commonly referred to as trade credit), or intermediated by banks. SWIFT provides data on letter of credits (L/C) underlying their interbank message code MT 700, which is estimated to be about half of total trade finance. The main drawback of using trade finance (based on L/Cs) as an indicator for the freely usable assessment is that growth in trade finance has lagged the growth in nominal trade in many countries for the past 10–15 years, and trade finance figures may not reflect correctly the developments in the “wide use” of currencies in international trade payments. Although the series from SWIFT are very comprehensive in terms of country coverage, as an indicator the L/Cs has a more regional rather than a global representation since the advanced economies and global banks account for a very limited share in total L/Cs, whereas emerging Asian economies account for a large share. SWIFT data allows Hong Kong SAR, Macao SAR, and Taiwan Province of China to be treated as domestic.

International Payments: SWIFT is a unique source of high frequency data on global payments that could potentially be useful for the assessment of currencies free usability if a number of issues can be addressed. SWIFT publishes a ranking of currencies used in global payments based on monthly data collected from the use of its standardized inter-bank messages, MT 103 and MT 202, for transfer of funds instructions. MT 103 covers payment instructions sent by or on behalf of the financial institution of the ordering customer to the financial institution of the beneficiary customer. MT 202 covers payments instructions sent by or on behalf of the ordering institutions directly or indirectly to the beneficiary financial institution. Besides being high-frequency, SWIFT’s data on payments offer granularity that allows for assessing the use of currencies from different vantage points. For instance, with the breakdown of payments between cross-border and domestic available, domestic payments that SWIFT uses in its ranking can be eliminated from the assessment of currency use in international transactions. Furthermore, intra-euro area payments and transactions within and between mainland China and Hong Kong SAR, Macao SAR, and Taiwan Province of China can be excluded.

MT103 and MT202 cover different underlying businesses and differ significantly in magnitudes. MT103 reflects single customer transfers related to transactions directly relevant for freely usable assessment. MT202, however, includes payments relevant for freely usable assessment as well as account transfers between financial institutions for book keeping purposes that are not relevant for the freely usable assessment. Payment transactions for which MT202 is used include purchase of securities, commodities, and foreign exchange. MT202 payments are about four to ten times as large as MT103 payments as transactions between financial institutions are generally much larger than transactions on behalf of banks’ customers.

There are some issues with SWIFT payment data relevant for the context in which it is used worth noting. First, payments related to a single economic transaction can be captured multiple times if several banks are involved in the payment chain, which could potentially overestimate currency use in this context. Second, while SWIFT's financial messaging system is used in most countries; coverage can vary across countries, as some domestic payment messages may be exchanged through countries' own payments networks. This is less of an issue if only cross-border payments are counted as international transactions, where except for messages transmitted through some major banks' own systems, SWIFT estimates its coverage at 90 to 95 percent of global transactions. Third, and specifically related to 202 messages, it is not possible to single out MT202 transactions driven solely by account transfers for book keeping purposes that are not relevant for the freely usable assessment. While including MT202 transactions would imply capturing some transactions not directly relevant for freely usable assessment, discarding them would mean removing relevant international transactions, particularly given the large magnitude of MT202 relative to MT103 transactions. Therefore, both 103-only and 103+202 are presented below to inform judgment on the global role of currencies in cross border transactions.

Table 1. SWIFT Payments

MT 103				MT 103 + MT 202											
Cross-border 1/		Cross-border plus third party-domestic use 2/		Cross-border 1/		Cross-border plus third-party domestic use 2/									
Case A 3/	Case B 4/	Case A 3/	Case B 4/	Case A 3/	Case B 4/	Case A 3/	Case B 4/								
USD	52.0	USD	51.9	USD	54.4	USD	53.9	1 USD	41.6	USD	41.5	USD	41.8	USD	41.2
EUR	30.2	EUR	30.1	EUR	28.1	EUR	27.9	2 EUR	36.6	EUR	36.5	EUR	37.0	EUR	36.4
GBP	5.3	GBP	5.3	GBP	5.0	GBP	4.9	3 GBP	4.3	GBP	4.3	GBP	4.1	GBP	4.0
CAD	2.1	CAD	2.1	CAD	2.0	CAD	2.0	4 JPY	3.3	JPY	3.3	JPY	3.2	JPY	3.2
JPY	1.8	JPY	1.8	JPY	2.0	JPY	1.9	5 CHF	2.4	CHF	2.4	CHF	2.3	RMB	2.8
CHF	1.5	CHF	1.5	CHF	1.4	CHF	1.4	6 CAD	2.3	CAD	2.3	CAD	2.2	CHF	2.3
AUD	1.1	AUD	1.1	AUD	1.2	RMB	1.3	7 AUD	1.9	AUD	1.9	AUD	1.8	CAD	2.1
SEK	1.0	SEK	1.0	SEK	0.9	AUD	1.2	8 RMB	1.0	RMB	1.2	RMB	1.1	AUD	1.8
NOK	0.8	NOK	0.8	NOK	0.8	SEK	0.9	9 HKD	0.9	HKD	0.9	HKD	0.8	HKD	0.8
DKK	0.5	RMB	0.5	DKK	0.5	NOK	0.8	10 SEK	0.7	SEK	0.7	SEK	0.7	SEK	0.6
12 RMB	0.4			12 RMB	0.4										

Source: Staff calculations based on transaction values from SWIFT messages MT 103 and MT 202 excluding MT 202 COV.

1/ Cross-border payments refer to payments between two different countries in the currency mentioned.

2/ Includes third-party domestic use in countries other than the issuer.

3/ Payments between Mainland China, Hong Kong SAR, Macao SAR, and Taiwan Province of China are excluded from cross-border payments. RMB-denominated payments within Hong Kong SAR, Macao SAR, and Taiwan Province of China are excluded from third-party domestic use.

4/ Payments between Mainland China, Hong Kong SAR, Macao SAR, and Taiwan Province of China are included in cross-border payments. RMB-denominated payments within Hong Kong SAR, Macao SAR, and Taiwan Province of China are included in third-party domestic use.