



IMF POLICY PAPER

REVIEW OF THE METHOD OF VALUATION OF THE SDR

May 16, 2022

IMF staff regularly produces papers proposing new IMF policies, exploring options for reform, or reviewing existing IMF policies and operations. The following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its May 11, 2022 consideration of the staff report.
- The **Staff Report**, prepared by IMF staff and completed on April 14, 2022 for the Executive Board's consideration on May 11, 2022.

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International Monetary Fund
Washington, D.C.



IMF Executive Board Concludes Quinquennial SDR Valuation Review and Determines New Currency Weights for SDR Valuation Basket

FOR IMMEDIATE RELEASE

- The current composition of the SDR currency and interest rate baskets was maintained and updated weights in the basket were approved.
- The updated basket implies slightly higher weights for the U.S. dollar and the Chinese renminbi and, accordingly, somewhat lower weights for the British pound, the euro, and the Japanese yen.
- The updated basket weights will come into effect on August 1, 2022.

Washington, DC – May 14, 2022: On May 11, 2022, the Executive Board of the International Monetary Fund (IMF) completed the quinquennial review of the method of valuation of the basket of currencies that make up the Special Drawing Right (SDR).¹ The review covered the composition and weighting of the SDR currency basket. The Executive Board also reviewed the corresponding interest rate instruments used to determine the SDR interest rate. The updated basket weights will come into effect on August 1, 2022.

The last SDR valuation review was concluded in 2015. Under the existing SDR valuation method adopted by the Executive Board, the SDR currency basket is reviewed every five years unless developments in the interim justify an earlier review. The current review is taking place about one year later than originally scheduled, as the Executive Board decided in March 2021 to extend the current basket until July 31, 2022 to prioritize work on the Fund's response to the COVID-19 pandemic, including work related to the 2021 General SDR allocation.

Executive Board Assessment

Executive Directors concluded the quinquennial review of the method of valuation of the Special Drawing Rights (SDR). They supported maintaining the current method of valuation of the SDR, including the selection criteria for inclusion in the basket and the methodologies for determining the currency weights and currency amounts in the basket, while formalizing the current practice and accepted statistical method of dealing with data gaps. Directors agreed to maintain the current composition of the

¹ The SDR is an international reserve asset created by the IMF to supplement the official reserves of its member countries.

SDR currency and interest rate baskets and approved their updated weights in the baskets.

Directors concurred that the export criterion and the freely usable criterion should continue to guide decisions on inclusion of currencies in the basket. They also agreed to maintain the methodology introduced in the 2015 review for determining currency weights and amounts in the SDR basket. Directors encouraged future reviews to include further analysis of the weights used in the formula to ensure that it continues to adequately capture the role of currencies in global trade and financial markets. They agreed that data gaps for indicators used in the SDR valuation review should be addressed by using available data within the relevant five-year period consistent with past practice, while continuing to explore availability of alternative variables to minimize data gaps.

Directors noted that based on developments in trade and financial markets over the period 2017-2021, the updated weights in the SDR basket maintain the same ranking of the initial weights set in the 2015 review, with slightly higher weights for the U.S. dollar and the Chinese renminbi and, accordingly, somewhat lower weights for the British pound, the euro, and the Japanese yen. Directors concurred that neither the COVID-19 pandemic nor advances in Fintech have had any major impact on the relative role of currencies in the SDR basket so far. They called for continuous monitoring of implications for the SDR valuation framework from fintech and other developments, including potential economic and financial fragmentation and high inflation. A few Directors also called for monitoring implications of economic sanctions on the valuation framework.

Directors welcomed the update on operational issues raised in previous reviews through a survey of SDR users and the finding that most users do not experience significant operational challenges using SDRs or operating in the five SDR basket currencies' markets. They noted however that the survey identified some remaining operational challenges for the currencies in the basket. In this context, Directors broadly acknowledged the progress made on financial market reforms in China, while calling for additional efforts to further open and deepen the onshore renminbi market, with some Directors also stressing the need to further enhance data transparency.

Directors agreed with the Managing Director's proposal for the next SDR review to take place on a five-year basis, to be concluded before end-July 2027.

Annex. Summary of Key Decisions

SDR Basket Composition and Size

The value of the SDR will continue to be based on a weighted average of the values of a basket of currencies comprising the U.S. dollar, euro, Chinese renminbi, Japanese yen, and pound sterling.

Currency Weights in the SDR (and SDR Interest Rate) Basket

With effect from August 1, 2022, the IMF has determined that the five currencies that meet the selection criteria for inclusion in the SDR valuation basket will be assigned the following weights based on their roles in international trade and finance:

- U.S. dollar 43.38 percent
- Euro 29.31 percent
- Chinese renminbi 12.28 percent
- Japanese yen 7.59 percent
- Pound sterling 7.44 percent

The amounts of each of the five currencies will be calculated on July 29, 2022 (the transition date) in accordance with the new weights and will go into effect on August 1, 2022.² The calculation will be made on the basis of the average exchange rates for these currencies over the three months ending on the transition date in such a manner as to ensure that the value of the SDR will be the same on that date under both the revised valuation and present valuation baskets.

As a service to the users of SDRs and in order to provide adequate notice, the Fund will project the currency amounts in the revised basket once in May and June and every week in July 2022, and post them on the IMF's website (www.imf.org). As the currency amounts will be based on a three-month average of exchange rates, these projections will tend to iterate toward the final effective amounts, thereby keeping users informed of the likely final currency amounts in the new basket that takes effect on August 1, 2022.

SDR Interest Rate

The SDR interest rate will continue to be determined as a weighted average of the interest rates on short-term financial instruments in the markets of the currencies comprising the SDR basket.

² A press release providing the final currency amounts in the new SDR valuation basket to take effect on August 1, 2022 will be issued by the IMF on July 29, 2022. The first SDR exchange rate using the new basket will be posted on August 1, 2022. The first SDR interest rate based on the new basket will be determined on August 5, 2022 and will be effective during the week of August 8-12, 2022. Further information on the SDR can be found on the IMF's website (<https://www.imf.org/en/data/imf-finances>).



April 14, 2022

REVIEW OF THE METHOD OF VALUATION OF THE SDR

EXECUTIVE SUMMARY

This paper provides the basis for the quinquennial review by the Executive Board of the method of valuation of the Special Drawing Right (SDR), hereafter SDR valuation review. The review covers the composition and weighting of the SDR currency basket, and the financial instruments used to determine the SDR interest rate.

In the five-year period for this review (2017–21), developments in key variables relevant for the SDR valuation suggest that there have been no major changes in the roles of currencies in the world economy. The countries and the currency union (euro area) whose currencies are currently included in the SDR basket remain the five largest exporters and their currencies continue to account for the majority of international financial transactions. Moreover, staff analysis finds that the COVID-19 pandemic and recent fintech developments have no systematic or material impact on the SDR valuation.

The paper proposes to maintain the current composition of the SDR currency and interest rate baskets, as well as the method for determining the currency weights and currency amounts in the basket. In line with the Board-approved methodology, the paper proposes updated weights for the currencies in the SDR basket. These maintain the same ranking of the initial weights set in the 2015 review, with slightly higher weights for the U.S. dollar and the Chinese renminbi and, accordingly, somewhat lower weights for the British pound, the euro, and the Japanese yen.

The paper also proposes to make explicit the treatment of data gaps in the SDR valuation framework. It proposes to formalize, through a modification of the valuation decision, the current practice of closing data gaps using available data for the relevant five-year period.

Findings from a survey of SDR department participants and prescribed holders are used to follow up on operational issues raised in earlier valuation reviews.

Responses provide limited evidence that mismatches between the SDR interest rate reset frequency and instrument maturity or differences in the sources and timing of data collection for SDR exchange rates hamper the hedging of SDR positions. The majority of survey respondents report operating across the five SDR basket currencies' markets without major difficulties. However, the survey identifies some remaining operational challenges, most of them pertaining to the Chinese renminbi.

It is proposed that the new SDR valuation and interest rate baskets will come into effect on August 1, 2022 for a period of five years, consistent with past practice.

In line with previous practice, the decision by the Executive Board regarding this review would be adopted well before August 1, 2022 in order to give notice to interested parties, and to complete any consultations that might be required. It is proposed that the next SDR valuation review take place in 2027.

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INTRODUCTION

1. **This paper provides the basis for the quinquennial review of the method of valuation of the Special Drawing Rights (SDR) currency basket.**¹ It covers the currency composition and weighting of currencies in the SDR basket. In line with past practice, the paper also reviews the financial instruments used to determine the SDR interest rate (i.e., the SDR interest rate basket).
2. **The paper proposes to maintain the current composition of the SDR currency and interest rate baskets, as well as the method for determining the currency weights and currency amounts in the basket.** In line with the methodology agreed by the Board in the context of the previous SDR valuation review in 2015, the paper updates the currency weights based on relevant indicators for 2017–21, the most recent five-year period. The paper also proposes that the Executive Board formalize the established practice of dealing with data gaps for indicators used in the SDR valuation by using data that is available within the relevant five-year period as part of the SDR valuation methodology.
3. **The paper further proposes that the new currency and interest rate baskets would come into effect on August 1, 2022.**² The current review is taking place about one year later than originally scheduled. Following the 2015 review and the entry into effect of the current basket on October 1, 2016, the current SDR valuation and interest rate baskets were originally scheduled to expire on September 30, 2021. In March 2021, the Executive Board decided to extend the current basket to July 31, 2022 to contribute to broader Fund efforts to prioritize work during the COVID-19 crisis and also to allow for a more suitable effectiveness date for the new basket that takes into account SDR users' suggestion to avoid changes on dates around which markets are closed or trading is thin in major financial markets.^{3,4} In view of the extension of the current basket to July 31, 2022, it is proposed that new currency and interest rate baskets would come into effect on August 1, 2022. This timetable provides adequate notice to interested parties and time to complete any consultations that might be required. It follows the Board's practice to generally take decisions on SDR valuation some time prior to the effective date of a new valuation basket.
4. **This paper is organized as follows.** The next section outlines the framework for the current methodology for the SDR valuation review. The section that follows reviews developments in the variables relevant to SDR valuation including exchange rates, exports, financial variables, and their implications for the current review. The subsequent section applies the currency selection criteria to confirm the composition of the SDR basket and determines proposed currency weights and

¹ The relevant decisions for the review of valuation of the SDR currency basket are Decision No. 12281-(00/98) G/S adopted October 11, 2000 (referred to hereafter in the text as "the 2000 Decision"), as modified by Decision No. 15891-(15/109) adopted November 30, 2015, and Decision No. 16979-(21/25), adopted on March 5, 2021.

² From an operational perspective, the SDR interest rate will reflect the new basket only starting August 8, as the currency amounts prevailing on Friday July 29, 2022 under the current SDR basket will be used to calculate the SDR interest rate for the week commencing August 1, 2022, in line with existing rules.

³ See [IMF Executive Board Approves Extension of Current SDR Basket Until July 31, 2022](#), Press Release No. 21/68 (03/15/2021).

⁴ The extension of the current SDR basket also allowed for giving priority to the SDR allocation workstream, leading to the historic general SDR allocation of about U.S. dollars 650 billion on August 23, 2021.

illustrative currency amounts in the new SDR basket, followed by a section that reviews the financial instruments that comprise the SDR interest rate basket. After that, there is a section that discusses operational issues, followed by a section that discusses enterprise risks associated with this review. The penultimate section discusses the transition to the new basket and the timing of the next SDR valuation review and sets out issues for discussion, followed by a final section that contains the proposed decisions.

FRAMEWORK FOR THE SDR VALUATION

5. The current method of SDR valuation was adopted by the Executive Board in 2000 and amended in 2015. The Articles of Agreement give the Executive Board broad authority to adopt and modify the method of valuation of the SDR, subject to special majority requirements.⁵ The current SDR valuation method, which reflects decisions taken in 2000 and 2015, has the following key elements: (i) currency selection criteria, (ii) currency weighting, (iii) currency amount calculation, and (iv) a periodic five-year review of the SDR valuation method. The reviews also typically cover the financial instruments used to determine the SDR interest rate (i.e., the SDR interest rate basket).

6. In practice, there has been a high degree of stability in the method of valuation of the SDR. Revisions to the method have been motivated by major changes in the roles of currencies in the world economy. Past reviews have been guided by long-standing principles that aim to enhance the attractiveness of the SDR as a reserve asset (Box 1).

7. The last review in 2015 included a number of important changes to the method of valuation of the SDR. Key among these was the expansion of the basket to five currencies, which resulted in the inclusion of the Chinese renminbi (RMB) as the fifth SDR basket currency, effective October 1, 2016, together with the inclusion of a suitable interest rate instrument for the RMB in the SDR interest rate basket.⁶ Other important changes included the Executive Board's approval of a new currency weighting formula, discussed below, and of the use of a currency-based approach for all aspects of the SDR basket currency selection and currency weighting (except the freely usable criterion).⁷ Another important change was the simplification of the formula for the determination of

⁵ Pursuant to Article XV, Section 2, "[t]he method of valuation of the SDR shall be determined by the Fund by a seventy percent majority of the total voting power, provided, however, that an eighty-five percent majority of the total voting power shall be required for a change in the principle of valuation or a fundamental change in the application of the principle in effect."

⁶ The inclusion of the Chinese renminbi in the SDR basket followed the Executive Board's determination that, effective October 1, 2016 and until further notice, the Chinese renminbi is a freely usable currency. This decision brought the number of SDR basket currencies to five: the U.S. dollar, the euro, the Japanese yen, the British pound, and the Chinese renminbi.

⁷ Prior to 2000, the sole criterion used in the SDR valuation framework (i.e., exports) was assessed on a member, rather than on a currency, basis. As prior to 2000, members whose currencies were included in the SDR basket issued their own currencies, there was a one-to-one relationship between members and currencies. This relationship ceased to hold with the advent of the euro (see para. 11 of the 2000 SDR Valuation review paper). Following the addition of the Euro to the SDR Basket, the 2000 SDR valuation review recognized that there were conceptual and operational difficulties in maintaining a member-based approach for the exports' criterion, and hence introduced a currency-based approach for the export and reserves variables with reference to members belonging to monetary unions. See [Review of the Method of Valuation of the SDR—Revised Proposed Decision and Illustrative Currency Amounts](#).

currency amounts in the SDR basket.⁸

Box 1. Broad Principles Guiding SDR Valuation Decisions

While not stated in any Fund decision, a number of broad principles have guided Executive Board decisions on the valuation of the SDR since the 1970s with the aim of enhancing the attractiveness of the SDR as a reserve asset.

These principles consist of the following:

- the SDR's value should be stable in terms of the major currencies;
- the currencies included in the basket should be representative of those used in international transactions;
- the relative weights of currencies included in the basket should reflect their relative importance in the world's trading and financial system;
- the composition of the SDR currency basket should be stable and change only as a result of significant developments from one review to the next; and
- 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.

Currency Selection

8. Under the current SDR valuation decision there are two selection criteria for inclusion of a currency in the SDR basket. The SDR basket comprises the five currencies issued by Fund members, or by monetary unions that include Fund members ("monetary unions"), (i) whose exports of goods and services during the most recent five-year period before the effective date of the revision had the largest value, and (ii) which have been determined by the Fund to be freely usable currencies in accordance with Article XXX(f) of the Fund's Articles of Agreement. This Article 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."

Currency Weighting, Currency Amounts, and SDR Valuation Method

9. The new formula for determining the respective weights of each SDR basket currency, approved by the Executive Board in 2015, provides for an equal weight of exports and financial variables to better reflect the growing role of international financial flows. The relative share of a currency in the basket is determined on the basis of its relative share in exports and a number of financial variables. The 2015 review broadened the coverage of the financial variables beyond reserves to capture currency use in private sector financial transactions.⁹ Specifically, the review introduced a composite financial indicator with similar weights for reserves (an indicator of use by public authorities), foreign exchange turnover (FXT, used to measure the widely traded aspect of freely usable currencies), and the sum of international bank liabilities (IBL)

⁸ See [IMF Modifies Rounding Methodology for Determining Currency Amounts in the SDR Basket, Press Release No. 16/358 \(7/25/2016\)](#).

⁹ The previous formula, adopted in 1978, had long recognized shortcomings, including the fact that it did not take into account private financial flows, which had grown rapidly. Alternative weighting formulas were discussed in SDR valuation reviews since 1980, but never proposed for formal adoption. In 2015, the Executive Board adopted the current formula among several possible alternatives, building on work presented in the 2010 review.

and international debt securities (IDS), which together are an indicator of currency use in private international financial transactions. The formula implies a 50 percent weight for exports, a weight of 1/6 for each of the three components of the composite financial variable.¹⁰

10. The Executive Board’s decision on currency weights specifies the initial weights of the currencies in the SDR basket, but the weights change over time in line with exchange rate developments. The currency amounts consistent with the Board-determined initial weights are fixed on the date the decision becomes effective. Subsequent daily valuations of the SDR are based on these fixed currency amounts. Movements in exchange rates alter the relative weights of the component currencies, with appreciating currencies gaining a larger share in the basket (Box 2).

Box 2. Determination of Currency Amounts and Actual Daily Weights

Currency amounts are the number of units of each currency in the SDR basket. The value of the SDR (in U.S. dollars) is the sum of these amounts, valued at daily exchange rates of the currencies against the U.S. dollar. Currency amounts are calculated on the last business day before the date a new basket becomes effective. On that day, currency amounts are derived from the weights decided by the Executive Board using the average exchange rate for each currency over the preceding three months. Currency amounts are adjusted proportionally to ensure that the value of the SDR is the same before and after the revision in the basket weights. The currency amounts remain fixed for the subsequent five-year period. As a result, the actual weight of each currency in the value of the SDR changes on a daily basis as a function of changes in exchange rates. As an example, the calculation of the SDR in terms of the U.S. dollar on March 31, 2022 and the corresponding weights are shown below.

Currency	Initial weight decided in 2015	Currency amount under Rule O-1	Exchange rate 1/ 3/31/22	U.S. dollar equivalent 2/	Actual weight 3/31/22
Chinese yuan	10.92	1.0174	6.35060	0.160205	11.59
Euro	30.93	0.38671	1.10955	0.429074	31.04
Japanese yen	8.33	11.900	121.68500	0.097793	7.07
U.K. pound	8.09	0.085946	1.31255	0.112808	8.16
U.S. dollar	41.73	0.58252	1.00000	0.582520	42.14
SDR1 = US\$				1.382400	

1/ Exchange rates in terms of U.S. dollar per currency unit except for the Japanese yen and the Chinese renminbi, whose exchange rates are expressed in terms of currency units per U.S. dollar. Chinese renminbi refers to the name of the currency, while Chinese yuan refers to the currency unit.
 2/ The US dollar equivalent is calculated as currency amount times exchange rate per currency unit.

11. While the existing Board decision envisages that currency weights under the approved formula be derived by using annual averages and year-end data over the most recent five calendar-year period, the practice has deviated due to data availability constraints. Annual data may not always be available for all currencies across all the variables used in the weighting formula. The 2015 SDR valuation review paper documented how data gaps were dealt with in previous reviews. For example, in the 2000 review, end-1999 reserves were used instead of a five-year average in the currency weight calculations, since the euro was a new currency with only one

¹⁰ The weight ω_i of currency i is therefore given by $\omega_i = (0.5 \times \frac{X_i}{\sum_j X_j}) + (\frac{1}{6} \times \frac{R_i}{\sum_j R_j}) + (\frac{1}{6} \times \frac{FX_i}{\sum_j FX_j}) + (\frac{1}{6} \times \frac{FA_i}{\sum_j FA_j})$ where X_i is exports of the issuer of currency i ; R_i , FX_i , and FA_i are reserve holdings, foreign exchange turnover, and the sum of international banking liabilities and debt securities denominated in currency i , respectively. The summations are taken over all five currencies composing the basket. See Decision No. 15891-(15/109) adopted November 30, 2015 for exact definitions.

year of observations at that time. In the 2015 review, to address lack of multi-year IBL data for the RMB, only the available point estimate for 2014 was used for the RMB data, while for other currencies, the five-year average (2010–14) was used.

12. The current review addresses data gaps in line with past practice. In general, averages based on annual or end-year data for the most recent five years, 2017–21 for the current review, can be calculated for most indicators but there are data gaps:

- Lack of multiple data points on annual FX turnover as the BIS conducts the survey of FX turnover only triennially. Consistent with past practice, in this review, the only available data point, the 2019 survey FX turnover, is used as the five-year average;¹¹
- Unavailability, up to the time this paper was completed, of published end-2021 BIS data on IBL. Therefore, end-September 2021 IBL data are used instead in the computation of the five-year average;
- Lack of the 2021 measure of international debt securities in euro excluding intra euro area positions (referred to as a broad measure of IDS in euro).¹² The available four-year average (2017–20) of the ratio of the broad measure of IDS to total IDS in euro is used to estimate the value for 2021. During 2017–20, this ratio has varied within a very narrow range of 0.777 to 0.783 percent, averaging 0.78.

Proposals

13. Staff sees merit in revising the SDR valuation decision to explicitly address how to deal with data gaps, consistent with the practice that has developed over past reviews. Staff proposes to formalize that practice, which is consistent with accepted statistical methods of using the data that is available within the relevant five-year period in calculating the five-year averages for all SDR valuation-related variables.¹³

14. No other changes to the method of valuation of the SDR are proposed in the current review. This is consistent with the principle of continuity following significant changes at the time of the last review in 2015, taking into consideration that there have been no major changes in the roles of currencies in the world economy in the interim.

¹¹ This issue is expected to be mitigated in the next two consecutive quinquennial valuation reviews as, for each review, data for two BIS triennial FX turnover surveys would be available.

¹² This measure is customarily obtained from the European Central Bank's annual report on the international role of the euro, which is published in June.

¹³ This proposed amendment would result in a change to the method of valuation of the SDR and therefore may only be approved by the Executive Board with a seventy percent majority of the total voting in accordance with Article XV, Section 2.

DEVELOPMENTS IN SDR VALUATION-RELATED VARIABLES

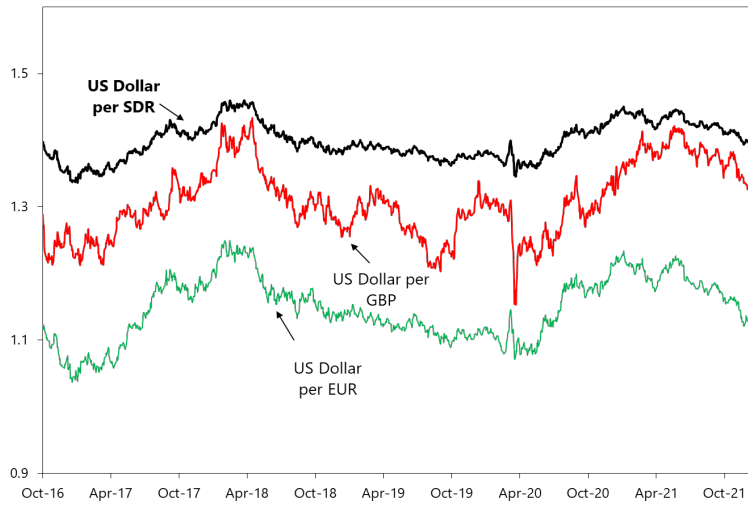
This section reviews developments in exchange rates; exports and financial variables used for both the selection and weighting of currencies in the basket, and other trends. It also assesses the impact of the COVID-19 pandemic on SDR valuation-related variables, as well as fintech advances and their potential implications for the method of valuation of the SDR.

A. Exchange Rate Developments

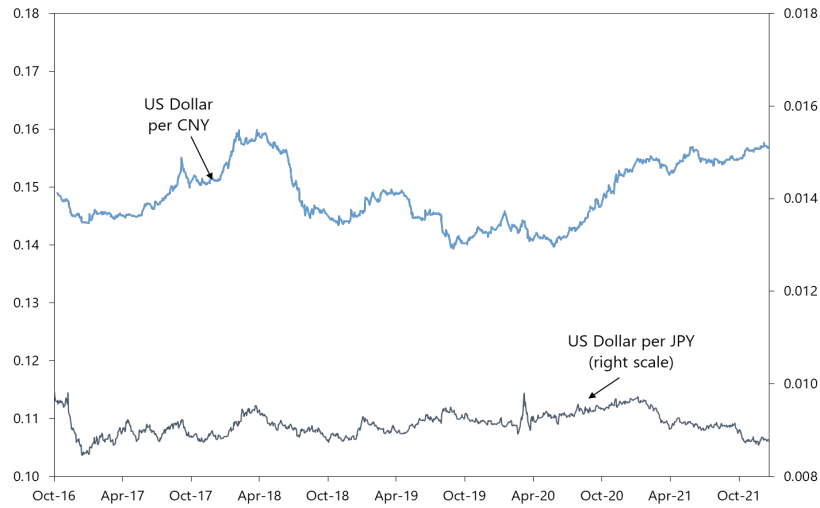
15. Since the current SDR basket became effective, the SDR has remained broadly stable at around 1.4 U.S. dollar per SDR, fluctuating within a band of about 4 percent. Reflecting the large weight of the U.S. dollar in the SDR basket, on average about 41.7 percent since the previous review, movements in the SDR value mirror to a large extent those of the U.S. dollar (Figure 1). With relatively stable exchange rates, the actual weights of currencies have also experienced limited changes. As of end-2021, the weights of the Chinese renminbi, British pound, and euro had gained somewhat relative to their weights at inception of the current basket, while the weights of the U.S. dollar and Japanese yen had declined somewhat (Figure 2).

Figure 1. U.S. Dollar Exchange Rate Movements, 2016–21^{1/}

A. U.S. Dollar per SDR, British Pound and Euro



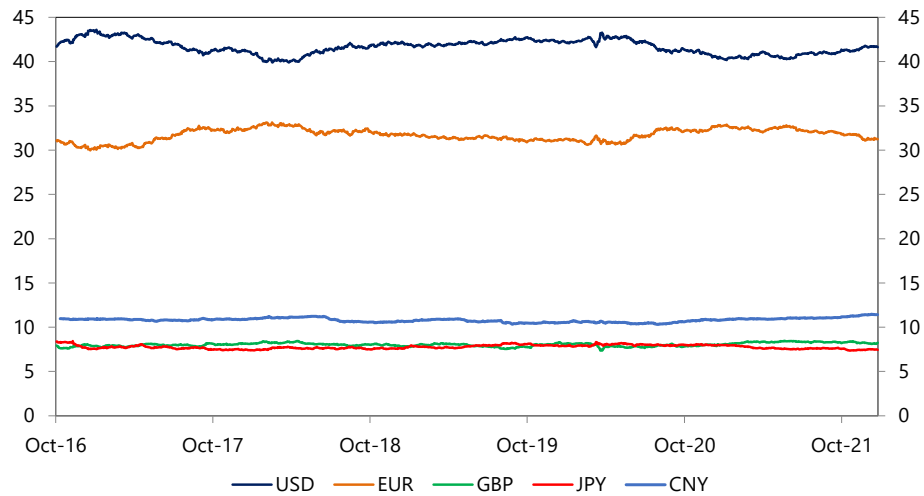
B. U.S. Dollar per CNY and JPY



Source: IMF Finance Department.

^{1/} Data is through end-December 2021.

Figure 2. Actual Currency Weights in the SDR Basket, 2016-21^{1/2/}
(in percent)



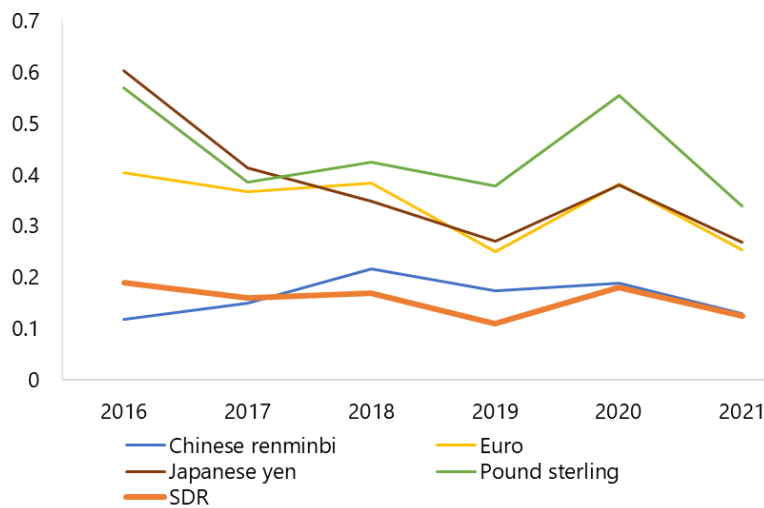
Source: IMF Finance Department.

1/ Data is through end-December 2021.

2/ The actual currency weights are calculated using the fixed currency amounts under rule O-1 and the daily exchange rates between currencies.

16. SDR movements against the SDR basket currencies have been less pronounced than those of the bilateral exchange rates for these currencies against each other. Further, the day-to-day volatility of the SDR/U.S. dollar exchange rate has been significantly lower than the volatility of the value of the SDR basket currencies measured in terms of the U.S. dollar, except for the RMB in 2016 and 2017 (Figure 3). Both factors reflect the diversification effect of a basket consisting of several currencies.

Figure 3. Exchange Rate Volatility, 2016-21^{1/}



Source: IMF Finance Department.

1/ Measured as the yearly mean of absolute daily percentage change in spot exchange rates against the U.S. dollar.

B. Developments in Exports and Financial Variables

The countries and the currency union (euro area) whose currencies are included in the SDR basket remain the five largest exporters and their currencies dominate Fund members' official reserves. They account for the majority of international banking and debt securities and make up three quarters of global foreign exchange turnover.

17. Since the last review, the ranking of the world's largest exporters has remained broadly unchanged. Updated data for 2017–21 show that the euro area and the United States remain the two largest exporters (Table 1 and Figure 4). China continues to be the third largest exporter.¹⁴ Japan and the United Kingdom rank fourth and fifth, respectively, separated by a narrow margin. The next largest exporters follow at some distance in terms of export shares.¹⁵

Table 1. Exports of Goods and Services
(Five-year averages, in percent of global total)^{1/}

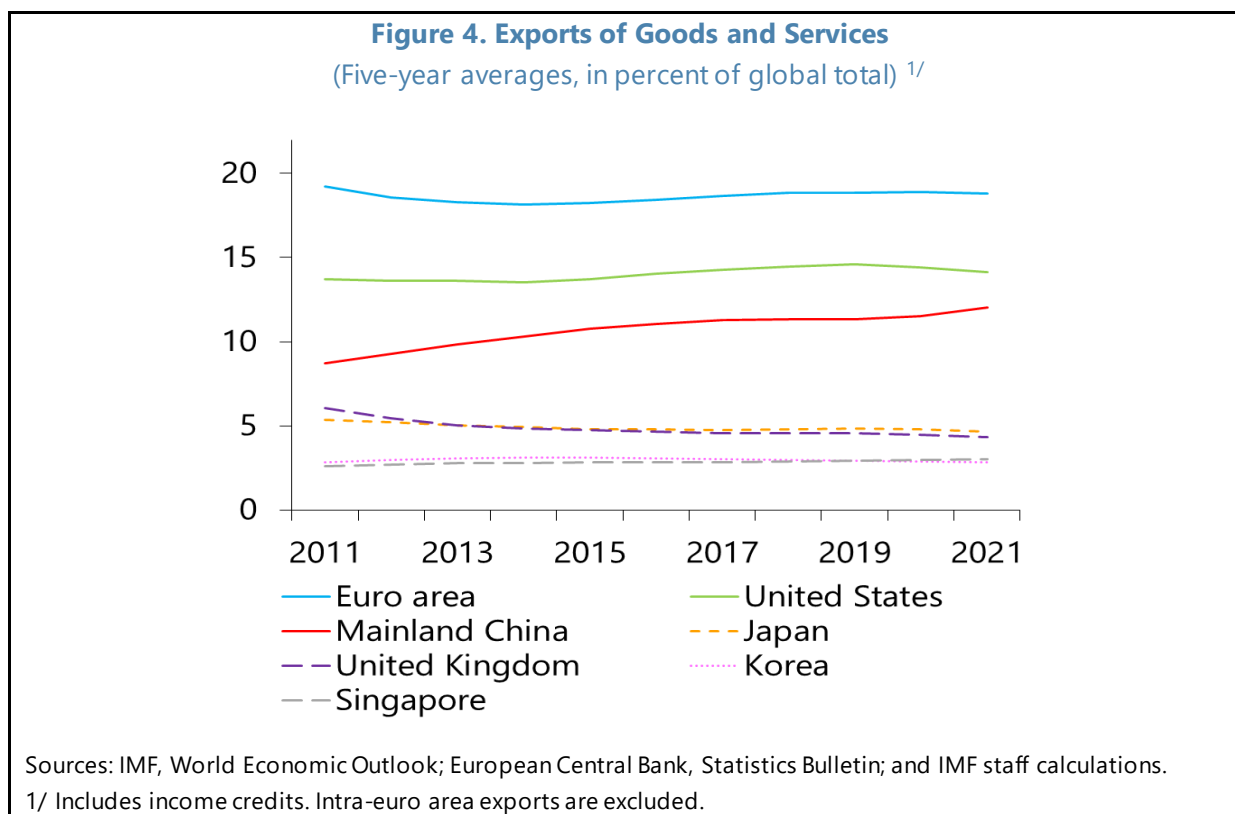
	2010–14		2017–21		
	SDR bn	%	SDR bn	%	
Euro area	2,662	18.3	3,462	18.8	
United States	1,985	13.6	2,602	14.1	
China, Mainland	1,533	10.5	2,215	12.0	
Japan	731	5.0	858	4.7	
United Kingdom	707	4.8	798	4.3	
Korea	465	3.2	Singapore	558	3.0
Singapore	401	2.7	Korea	525	2.9
Canada	395	2.7	Switzerland	505	2.7
Russia	388	2.7	Canada	472	2.6
Switzerland	388	2.7	India	453	2.5
<i>Memo Item:</i>					
SDR basket currencies	7,617	52.2	SDR basket currencies	9,935	54.0

Sources: IMF, World Economic Outlook; European Central Bank, Statistics Bulletin; and IMF staff calculations.

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

¹⁴ China's exports are assessed at the level of the Mainland, in line with the currency-based approach for SDR valuation (see Annex I).

¹⁵ Under current Executive Board decisions, a currency shall not replace another currency included in the list at the time of the determination unless the value of the exports of goods and services of the member or of members of a monetary union, whose currency is not included in the list, during the relevant period exceeds that of the member or the monetary union issuing the currency included in the list by at least one percentage point.



18. The SDR basket currencies also continue to dominate official reserves balances. About 93 percent of official reserve holdings reported by central banks are denominated in the SDR basket currencies (Table 2). The IMF’s Currency Composition of Official Foreign Exchange Reserves (COFER) survey indicates that the RMB, reported separately in COFER after the RMB’s inclusion in the SDR basket in 2016, has become the fifth largest currency of denomination of official reserves since 2018. The shares of other basket currencies in official reserves holding have remained broadly stable.

19. International debt securities (IDS) and international bank liabilities (IBL) data confirm that the SDR basket currencies also continue to play a key role in international financial markets. These currencies have been the main currencies of denomination of IDS and IBL, together constituting about 95 percent and 87 percent of the total IDS and IBL, respectively (Tables 3 and 4). The shares of each currency have remained broadly stable. The RMB continues to lag some non-SDR basket currencies on these two indicators.

Table 2. Official Reserves (shares in percent of allocated reserves) ^{1/}														
2017			2018			2019			2020			2021		
	SDR bn	%		SDR bn	%		SDR bn	%		SDR bn	%		SDR bn	%
USD	4,410	62.7	USD	4,763	61.8	USD	4,864	60.7	USD	4,854	58.9	USD	5,064	58.8
EUR	1,418	20.2	EUR	1,594	20.7	EUR	1,648	20.6	EUR	1,754	21.3	EUR	1,777	20.6
JPY	344	4.9	JPY	400	5.2	JPY	470	5.9	JPY	497	6.0	JPY	480	5.6
GBP	319	4.5	GBP	341	4.4	GBP	371	4.6	GBP	390	4.7	GBP	412	4.8
CAD	142	2.0	RMB	146	1.9	RMB	155	1.9	RMB	189	2.3	RMB	240	2.8
AUD	127	1.8	CAD	142	1.8	CAD	149	1.9	CAD	171	2.1	CAD	205	2.4
RMB	87	1.2	AUD	125	1.6	AUD	136	1.7	AUD	151	1.8	AUD	156	1.8
CHF	12	0.2	CHF	11	0.1	CHF	12	0.1	CHF	14	0.2	CHF	18	0.2
Other	171	2.4	Other	189	2.4	Other	201	2.5	Other	218	2.7	Other	259	3.0
<i>Memo items:</i>														
Unallocated	1,014	12.6	Unallocated	510	6.2	Unallocated	546	6.4	Unallocated	584	6.6	Unallocated	634	6.9
SDR basket			SDR basket			SDR basket			SDR basket			SDR basket		
currencies	6,578	93.6	currencies	7,246	93.9	currencies	7,508	93.8	currencies	7,683	93.3	currencies	7,972	92.6

Source: IMF, Currency Composition of Official Foreign Exchange Reserves survey.
1/ For each year, shares presented before memorandum items add up to 100 percent.

Table 3. International Debt Securities Outstanding (outstanding shares in percent of global total) ^{1/ 2/}														
2017			2018			2019			2020			2021		
	SDR bn	%		SDR bn	%		SDR bn	%		SDR bn	%		SDR bn	%
USD	7,445	45.2	USD	7,954	46.5	USD	8,390	46.7	USD	8,437	45.1	USD	9,377	47.1
EUR	6,435	39.0	EUR	6,558	38.3	EUR	6,787	37.8	EUR	7,493	40.0	EUR	7,622	38.3
GBP	1,363	8.3	GBP	1,355	7.9	GBP	1,478	8.2	GBP	1,479	7.9	GBP	1,580	7.9
JPY	299	1.8	JPY	319	1.9	JPY	326	1.8	JPY	311	1.7	JPY	286	1.4
AUD	200	1.2	AUD	185	1.1	AUD	187	1.0	AUD	193	1.0	AUD	193	1.0
CHF	147	0.9	CHF	138	0.8	CHF	137	0.8	CHF	141	0.8	CHF	142	0.7
CAD	99	0.6	CAD	89	0.5	CAD	99	0.6	SEK	105	0.6	CAD	102	0.5
SEK	72	0.4	HKD	78	0.5	SEK	84	0.5	CAD	92	0.5	SEK	99	0.5
HKD	63	0.4	SEK	75	0.4	HKD	81	0.5	HKD	84	0.4	HKD	84	0.4
RMB	51	0.3	RMB	56	0.3	RMB	53	0.3	RMB	61	0.3	RMB	68	0.3
Other	315	1.9	Other	301	1.8	Other	328	1.8	Other	320	1.7	Other	339	1.7
<i>Memo items:</i>														
RMB 2/	72	0.4	RMB 2/	78	0.5	RMB 2/	71	0.4	RMB 2/	78	0.4	RMB 2/	88	0.4
SDR basket			SDR basket			SDR basket			SDR basket			SDR basket		
currencies	15,593	94.6	currencies	16,242	94.9	currencies	17,034	94.9	currencies	17,782	95.0	currencies	18,934	95.2

Source: BIS Statistics Warehouse, Debt Securities Statistics; ECB, The International Role of the Euro; and IMF staff calculations.
1/ Hong Kong SAR, Macao SAR, and Taiwan Province of China are treated as domestic (based on residency of issuers).
2/ Amount for RMB if Hong Kong SAR, Macao SAR, and Taiwan Province of China were treated as international.

Table 4. International Banking Liabilities
(shares in percent of global total) ^{1/}

2017			2018			2019			2020			2021Q3		
	SDR bn	%		SDR bn	%		SDR bn	%		SDR bn	%		SDR bn	%
USD	12,173	53.2	USD	12,443	52.8	USD	12,873	52.5	USD	13,550	50.1	USD	14,325	51.2
EUR	6,006	26.2	EUR	6,291	26.7	EUR	6,435	26.3	EUR	7,529	27.8	EUR	7,574	27.0
GBP	1,048	4.6	GBP	1,051	4.5	GBP	1,112	4.5	GBP	1,248	4.6	GBP	1,284	4.6
JPY	636	2.8	JPY	697	3.0	JPY	726	3.0	JPY	736	2.7	JPY	743	2.7
CHF	290	1.3	CHF	285	1.2	CHF	354	1.4	CHF	365	1.3	CHF	328	1.2
RMB	188	0.8	RMB	182	0.8	RMB	204	0.8	RMB	268	1.0	RMB	310	1.1
Other	2,496	10.9	Other	2,567	10.9	Other	2,709	11.1	Other	3,245	12.0	Other	3,347	12.0
Unallocated	62	0.3	Unallocated	60	0.3	Unallocated	97	0.4	Unallocated	130	0.5	Unallocated	90	0.3
<i>Memo items:</i>														
RMB 2/	484	2.1	RMB 2/	486	2.1	RMB 2/	486	2.0	RMB 2/	637	2.4	RMB 2/	732	2.6
SDR basket			SDR basket			SDR basket			SDR basket			SDR basket		
currencies	20,052	87.6	currencies	20,664	87.6	currencies	21,350	87.1	currencies	23,332	86.2	currencies	24,236	86.6

Sources: BIS Locational Banking Statistics; IMF staff calculations based on BIS data; Haver Analytics; and national sources.

1/ For each period, shares presented before memorandum items add up to 100 percent.

2/ Hong Kong SAR, Macao SAR, and Taiwan Province of China are treated as international.

20. The five currencies in the SDR basket also continue to dominate turnover in global foreign exchange markets (Table 5). The share of the five SDR basket currencies in total global foreign exchange turnover has remained broadly stable since the last review period. It moved from 78.6 percent on average in 2010 and 2013, to 78.0 percent on average in 2016 and 2019.¹⁶ This small decline is mostly accounted for by a reduction in the shares of the euro and Japanese yen, while the share of the Chinese renminbi has continued to rise. Currencies outside the SDR basket with turnover shares exceeding one percent are the Australian dollar, Canadian dollar, Swiss franc, Hong Kong dollar, and New Zealand dollar.

Table 5. Currency Composition of Global Foreign Exchange Market Turnover
(shares in percent of global total) ^{1/ 2/}

2010			2013			2016			2019		
	SDR bn	%		SDR bn	%		SDR bn	%		SDR bn	%
USD	2,222	42.4	USD	3,100	43.5	USD	3,150	43.8	USD	4,198	44.2
EUR	1,023	19.5	EUR	1,190	16.7	EUR	1,129	15.7	EUR	1,535	16.1
JPY	497	9.5	JPY	820	11.5	JPY	778	10.8	JPY	799	8.4
GBP	337	6.4	GBP	421	5.9	GBP	460	6.4	GBP	608	6.4
AUD	199	3.8	AUD	308	4.3	AUD	247	3.4	AUD	322	3.4
CHF	165	3.2	CHF	184	2.6	CAD	185	2.6	CAD	239	2.5
CAD	138	2.6	CAD	163	2.3	CHF	173	2.4	CHF	236	2.5
HKD	62	1.2	MXN	90	1.3	RMB	143	2.0	RMB	205	2.2
SEK	57	1.1	RMB	80	1.1	SEK	80	1.1	HKD	168	1.8
NZD	42	0.8	NZD	70	1.0	NZD	74	1.0	NZD	99	1.0
17th RMB	23	0.4									
<i>Memo item:</i>											
SDR basket			SDR basket			SDR basket			SDR basket		
currencies	4,102	78.3	currencies	5,610	78.8	currencies	5,660	78.7	currencies	7,346	77.3

Source: BIS, Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets; and IMF staff calculations.

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.

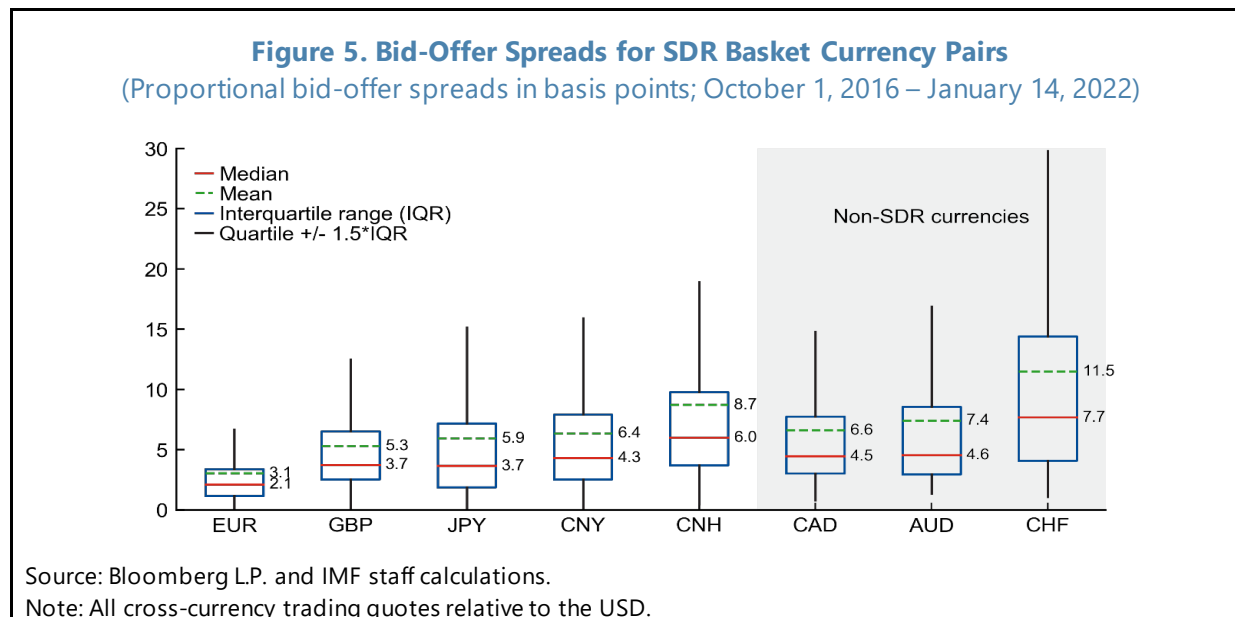
2/ Because each transaction involves two currencies, the nominal amounts by definition sum up to twice the total turnover for all currencies.

¹⁶ The BIS surveys central banks on a triennial basis regarding foreign exchange and derivatives markets activity as described in Annex I.

C. Other Developments

Currency Market Liquidity

21. Staff analysis on the liquidity of SDR basket currencies suggests that trading among different SDR currency pairs has remained highly liquid since the current SDR basket became effective on October 1, 2016. Consistent with the analysis conducted for the 2015 SDR review, staff examined proportional bid-offer spreads using daily data from Bloomberg L.P. between October 1, 2016 and January 14, 2022 to assess market liquidity and gauge the cost of executing spot market trades of SDR basket currency pairs (see Annex II). Lower bid-offer spreads are an indication of market liquidity and measure of buyers' and sellers' ability to execute trades at lower cost. The average bid-offer spread of all SDR basket currencies remained under ten basis points for the observed period (Figure 5). This is in line with the size of spreads observed during the period (June 5, 2014 to June 5, 2015) covered in the analysis conducted for the 2015 SDR valuation review and indicates that trading among the SDR currency pairs has remained highly liquid since the current SDR basket became effective in 2016.



COVID-19 Pandemic

22. Fluctuations in key valuation variables have either been small or temporary and thus do not indicate a systematic impact of COVID-19 on the current valuation method. Staff analyzed the potential impact of the pandemic (data for 2020–21) on a subset of indicators used in the SDR valuation review—exports, reserves, international banking liabilities, and international debt

securities—comparing yearly changes to these variables to historical patterns.¹⁷ For most issuers of SDR basket currencies, only exports registered significant declines in 2020 (see Box 3 for details). However, this effect was largely offset by a recovery in 2021. Annual changes of other indicators were relatively small and not systematic (i.e., going in the same direction across all variables) for most currencies.

Box 3. Impact of the COVID-19 Pandemic on SDR Valuation-Related Variables

To assess the impact of the COVID-19 pandemic, staff compared yearly changes in key variables with historical changes. In particular, staff compared annual changes to SDR valuation variables—including exports, reserves, international banking liabilities, and international debt securities—over 2020–21 with annual changes experienced in earlier years (2010–19). “Significant and large” changes are considered to be outside of the two-standard deviation range from the mean of such changes over the sample period under consideration (2010–21).

Staff did not find a systemic impact of the pandemic on key SDR valuation variables. As shown in the table below, only fluctuations in exports were significant and large by this measure for three of the five SDR basket currency issuing members (or currency unions including members). However, sharp contractions in 2020 were largely offset by significant recoveries in 2021, which exceeded one standard deviation from the mean for three currency issuers. Other variables did not exhibit unusually large fluctuations in 2020 and 2021 across most SDR basket currencies, likely reflecting their nature as stock variables. Furthermore, there is no evidence of systematic change experienced by a particular currency across the entire set of variables. As a result, the current methodology of using five-year averages for valuation-related variables does not lead to changes in rankings or significant shifts in shares for the 2017–21 period that could be attributed to COVID-19.

Potential Impact of COVID-19 on SDR Valuation-Related Variables

(Percentage annual change, 2020 and 2021) 1/ 2/

	Exports		Reserves		International Banking Liabilities		International Debt Securities	
	2020	2021	2020	2021	2020	2021	2020	2021
United States	↓ -15.21	↑ 14.18	↓ -0.20	↑ 4.32	↑ 5.26	↑ 5.71	↑ 0.56	↑ 11.14
Euro area	↓ -9.24	↑ 14.86	↑ 6.41	↑ 1.30	↑ 14.42	↓ -0.84	↑ 9.73	↑ 2.15
United Kingdom	↓ -18.44	↑ 12.73	↑ 4.96	↑ 5.62	↑ 12.18	↑ 2.94	↑ 0.07	↑ 6.83
Japan	↓ -12.58	↑ 8.94	↑ 5.70	↓ -3.36	↑ 1.47	↑ 0.92	↓ -4.48	↓ -8.01
China, Mainland	↑ 2.24	↑ 25.54	↑ 21.59	↑ 27.35	↑ 31.09	↑ 14.85	↑ 10.51	↑ 12.57

1/ Calculation of percentage annual change is based on levels.

2/ Cells in green represent changes between the mean +/- 1 St. Dev., in yellow when the change is between 1 and 2 St. Dev., and in red when the change is greater than the mean +/- 2 St. Dev (sample used: 2010-21).

Green and red arrows represent positive and negative percent annual changes, respectively.

Fintech

23. Developments in Fintech have gained momentum since the last review but have not had a material impact on the SDR valuation framework. Since the launch of bitcoin, the range of cryptoassets has broadened and their total value increased significantly. However, private coins

¹⁷ The focus is on Board-approved indicators used for the weighting of currencies in the SDR basket. For FX market turnover, post-pandemic data from the BIS is not yet available as it is published in the Triennial Central Bank Survey every three years and the most recent one was published in 2019.

cannot be part of the SDR basket under the current SDR valuation framework albeit they could have a significant impact on the international monetary system in the future. Central bank digital currencies (CBDCs) are generally at an experimental stage though a few countries have issued CBDCs. As digital assets—whether CBDCs or private coins—are poised to have an impact on the global financial system should there be wide adoption and cross-border use, keeping abreast of developments would be very important to inform subsequent SDR valuation reviews (Box 4).

Box 4. Fintech Developments and Implications for the SDR Valuation Framework

Advances in financial technology (fintech) have potential implications for the SDR valuation framework. These advances include the growing importance of e-money, as well as the emergence of new digital assets, including privately issued digital coins and CBDCs ([Garrido and Nolte, 2021](#)). Digital private coins, including those pegged to a stable reference asset and called stablecoins are often referred to as cryptoassets given their reliance on cryptography. These coins have been increasingly used as medium of exchange and store of value. Many central banks are also contemplating the issuance of CBDCs to adapt to the increasingly digitalized world. The cross-border use of cryptoassets and CBDCs could impact the SDR valuation framework, including through capital flows and exchange rates, but the direction and size of the effects are not clear yet.

Cross-border use of cryptocurrencies in payments remains small. Since the launch of Bitcoin, cryptoassets have evolved into an asset class of interest, including to countries' monetary authorities. The range of cryptoassets has broadened and their total value increased significantly.¹ However, the market capitalization of cryptoassets still remains small relative to traditional asset markets, and there is no evidence of meaningful cross-border use. Even if there were evidence of widespread cross-border use of privately-issued coins, these coins are not eligible for inclusion in the SDR basket, which, under the current SDR valuation framework, is composed of currencies issued by IMF members or currency unions including IMF members and meeting specific criteria as discussed in the section on the SDR valuation framework. The cross-border use of cryptoassets could affect the SDR valuation framework only insofar as there is substantial substitution for fiat currencies and data on the use of cryptoassets in cross-border transactions becomes available. Under the new Data Gap Initiative, the Fund and other international institutions and bodies envisage to lead efforts to collect such data.²

Cross-border use of CBDCs is still at an experimental stage. While many central banks are exploring the possibility of issuing CBDCs, these initiatives are at different stages of development even among the monetary authorities that issue SDR basket currencies. China is among the most advanced, with pilots for its retail e-CNY already completed in several cities. The US, the UK, and the euro area are at the research stage, also exploring the possibility of issuing CBDCs after a careful examination of opportunities, risks, regulatory pre-requisites, and design issues.³ Among central banks that are non-issuers of SDR basket currencies, the Eastern Caribbean Currency union (ECCU) is already at an advanced stage of testing while the Bahamas and Nigeria have already issued their own CBDCs. While many CBDC experiments are for domestic retail purposes, there is growing recognition that one of the major potential contributions of CBDCs is their ability to enhance cross-border payments. Factoring an international dimension into the design of CBDCs and considering the feasibility of new multilateral platforms and arrangements for cross-border payments are among the building blocks of the [G20 roadmap](#) for enhancing cross-border payments, a priority initiative of the G20. Important policy issues have to be considered for the design of CBDCs in this context, such as challenges to the conduct of domestic monetary policies and to financial stability, or the need to align regulatory, supervisory and oversight frameworks for cross-border payments.⁴ The use of CBDCs to facilitate cross-border payments is already being tested in several collaborative projects involving the BIS Innovation Hub (projects [Dunbar](#) and [mCBDC Bridge](#), project [Jura](#)).

¹ As of end-December 2021, there were about 17,000 cryptoassets and the overall market size has increased significantly to almost US\$2.2 trillion from US\$800 billion at end-2020 and US\$17.3 billion at end-2016.

² See the section on the new G20 DGI (section IV) in the [Sixth Progress Report on the G20 Data Gap Initiative](#).

³ An [IMF Staff Discussion Note](#) and a BIS staff [working paper](#) provide details on design issues.

⁴ The issues are discussed in an IMF [paper](#) and, at the multilateral level, in a [joint report](#) to the G20 by the IMF, the BIS, and others.

COMPOSITION AND WEIGHTING OF CURRENCIES IN THE UPDATED SDR BASKET

In light of the developments described above, this section proposes the composition of the SDR basket to remain unchanged and new initial weights of the current SDR basket currencies to be calculated using the formula the Board adopted in 2015. The proposed initial weights result in an unchanged ranking of currencies in the SDR basket compared to the initial weights set in the 2015 review.

A. SDR Currency Basket Composition

24. Staff proposes that the currency composition of the SDR basket remain unchanged.

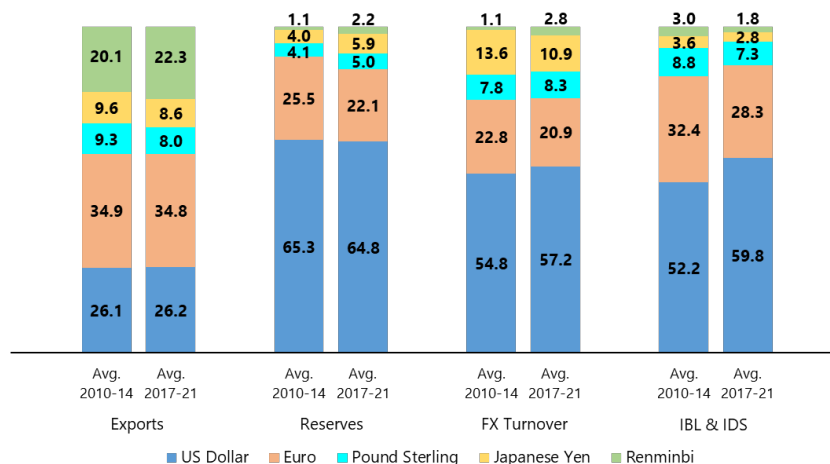
The SDR basket would therefore continue to comprise the U.S. dollar, the euro, the Chinese renminbi, the pound sterling, and the Japanese yen. As discussed above, the five members/monetary union issuing the currencies in the current SDR basket have continued to be the largest five exporters since the 2015 review of the SDR valuation (Table 1). Similarly, these five currencies, previously determined by the Executive Board to be freely usable in line with the Articles, continue to play a dominant role in international financial transactions, based on data for international reserves, international bank liabilities, and international debt securities (Tables 2,3,4). With respect to the volume of transactions in the principal foreign exchange markets, the SDR basket currencies also account for the bulk of turnover (Table 5).

B. Currency Weights

25. Updated weights calculated using the Board-adopted weighting formula yield an unchanged ranking among the five SDR basket currencies, and a modest increase in the weights of the U.S. dollar and the Chinese renminbi (Figure 6 and Annex I, Table AI.2). The share of the U.S. dollar rose across all indicators (except reserves) comparing the five-year period of 2017–21 with the five-year period of 2010–14. The share of the Chinese renminbi also rose consistently, except for international banking liabilities. Accordingly, the weights of the U.S. dollar and the Chinese renminbi would increase slightly (see Table 6 below) and the weights of the remaining three currencies decrease slightly, compared to the initial weights set in the 2015 review.¹⁸ Currency weights are rounded to two decimal places as endorsed at the 2015 review.

¹⁸The increased weight of the RMB is broadly consistent with findings in the literature on RMB internationalization, such as trends in the RMB internationalization index developed by Peng and Tan (Figure 7).

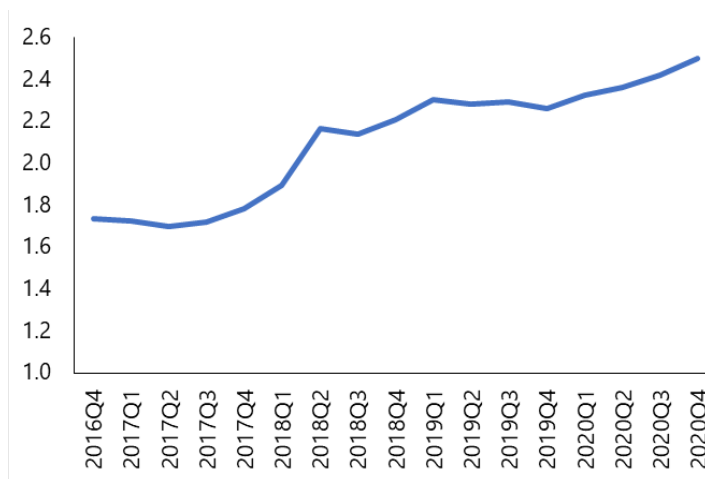
Figure 6. Shares of SDR Basket Currencies in the Four Components of the Weighting Formula (2010–14 and 2017–21, in percent)^{1/}



Source: Same sources used for Tables 1 to 5 and staff calculations.

^{1/} Figures for 2010–14 are as in the 2015 review paper.

Figure 7. RMB Internationalization Index ^{1/}



Sources: IMF, World Economic Outlook; IMF, Currency Composition of Official Foreign Exchange Reserves survey; BIS Locational Banking Statistics; Monetary Authority of Singapore; Haver Analytics; BIS Statistics Warehouse, Debt securities statistics; Boz Emine, Camila Casas, Georgios Georgiadis, Gita Gopinath, Helena Le Mezo, Arnaud Mehl, Tra Nguyen, 2020, “Patterns in Invoicing Currency in Global Trade,” IMF Working Paper, WP/20/126 (Washington: International Monetary Fund); and IMF staff calculations.

^{1/} To reflect the role of an international currency in store of value, medium of exchange, and unit of account, the RMB internationalization index is a weighted average of the share of a currency in allocated official reserves, the share of a currency in global foreign exchange turnover, and the share of international debt securities denominated in a currency, with the weights determined following the methodology of Peng and Tan (2017) — see Peng, H., and X. Tan, 2017, RMB Internationalization: Degree Measurement and Determinants Analysis, *Economic Research Journal*, 2017 (2), pp. 125-139. In essence, it is derived from a principal component analysis of these indicators while excluding the impact of fundamental factors determining the internationalization of a currency. The data used is 2016Q4 to 2020Q4. The trend in this index is consistent with other indicators such as SWIFT data on cross-border payments and on letters of trade credit.

Table 6. Proposed SDR Currency Basket Weights Under the Board-Adopted Formula

	Proposed weights	Initial weights set in 2015	Change p.p.
U.S. dollar	43.38	41.73	1.65
Euro	29.31	30.93	-1.62
British pound	7.44	8.09	-0.65
Japanese yen	7.59	8.33	-0.74
Renminbi	12.28	10.92	1.36
Total	100.00	100.00	0.00

Source: IMF Staff calculations using data in Tables 1 through 5.

C. Currency Amounts in the SDR Basket

26. New currency amounts would be set consistent with the proposed relative weights of each of the SDR basket currencies.¹⁹ The currency amounts will be calculated based on the last three months of exchange rates for the component currencies leading up to the inception of the new SDR basket on August 1, 2022. The transition from the current to the new basket will ensure that the new currency amounts yield the same value for the SDR in terms of the U.S. dollar on the basis of the old and new currency amounts in the basket on the last business day before August 1, 2022 (i.e., July 29, 2022). Table 7 provides an illustrative calculation of the new currency amounts in the SDR basket for the proposed currency weights using average exchange rates for the period January 1–March 31, 2022.

Table 7. Illustrative Currency Amounts^{1/2}

Currency	Currency Weights	Currency Amounts
US dollar	43.38	0.60452
Euro	29.31	0.36423
British pound	7.44	0.077290
Japanese yen	7.59	12.297
Renminbi	12.28	1.0875

Source: IMF Staff calculations.

1/ For a given set of weights, the currency amounts shown are indicative amounts. Final currency amounts would be set on July 29, 2022 and would likely be different depending on (i) the average and end-period exchange rates of the base reference period to be used for revising the SDR basket's currency components, and (ii) the rounding procedures to be applied to the currency amounts themselves.

2/ Based on January 1 – March 31, 2022 average exchange rates.

¹⁹ Current procedures for determining currency amounts are set out in Decision No. 8160-(85/186) G/S, adopted December 23, 1985, as amended by Decision No. 12283-(00/98) G/S, adopted October 11, 2000 and Decision No. 16033-(16/17), adopted July 20, 2016. See also [IMF Modifies Rounding Methodology for Determining Currency Amounts in the SDR Basket, Press Release No. 16/358 \(7/25/2016\)](#).

REVIEW OF INSTRUMENTS IN THE SDR INTEREST RATE BASKET

27. The Executive Board has agreed in previous reviews that the financial instruments in the SDR interest rate basket should have certain characteristics. In particular, such instruments should be (i) broadly representative of the range of financial instruments that are actually available to investors in a particular currency, and the interest rate on the instruments should be responsive to changes in underlying credit conditions in the corresponding money market; and (ii) 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 choice of reserve managers, for example, as regards the form of the financial instrument, its liquidity, and maturity. In line with this guidance, all financial instruments in the current SDR interest rate (SDRi) basket are three-month government securities.

28. The current representative interest rates for the five currencies in the SDR basket are as follows:

- U.S. dollar – Market yield for three-month U.S. Treasury Bills;
- Euro - Three-month spot rate for euro area central government bonds with a rating of AA and above published by the ECB;
- Japanese yen – Market yield for three-month Japanese Treasury Discount Bills;
- British pound – Market yield for three-month U.K Treasury bills; and
- Chinese renminbi – Three-month benchmark yield for China Treasury bonds as published by the China Central Depository and Clearing Co.

The yields on these instruments are used to calculate the SDRi for each week (Box 5). Developments in the SDRi since the 2015 review are shown in Figure 8.

Box 5. Interest Rate Calculation

For the week of January 24, 2022 to January 30, 2022
(Data as of Wednesday, January 26, 2022)

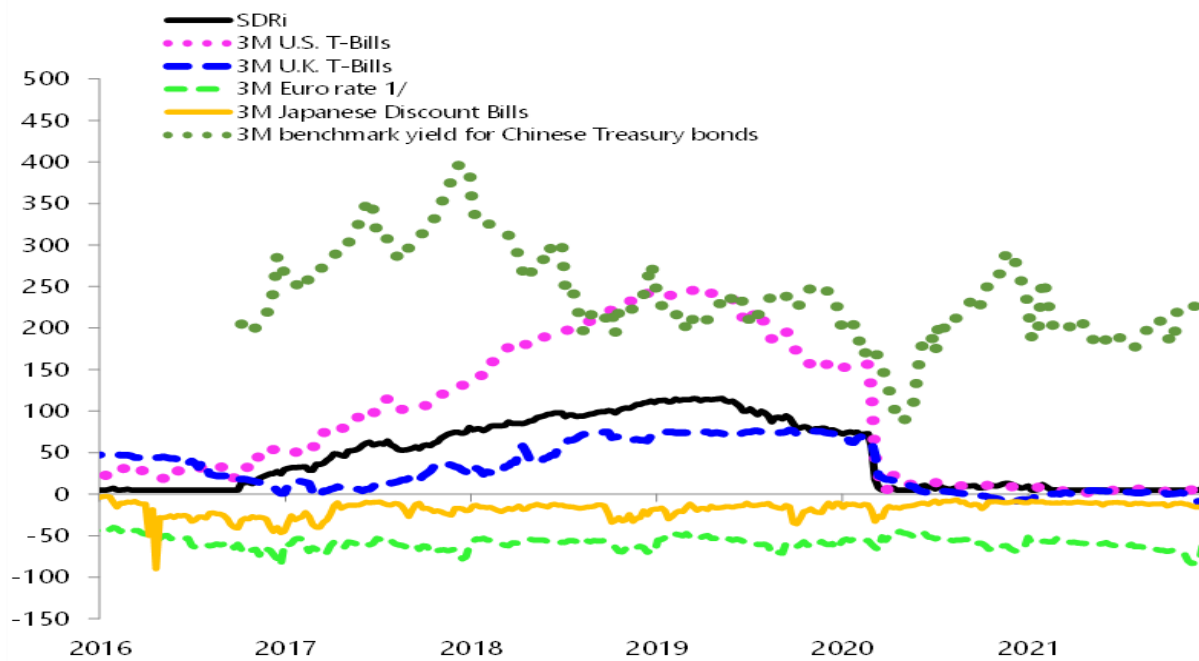
Currency	Currency amount under Rule O-1 (A)	Exchange rate against the SDR 1/ (B)	Interest rate 2/ (C)	Product (A) x (B) x (C)
Chinese yuan	1.0174	0.112481	1.875000	0.2146
Euro	0.38671	0.809402	-0.54334	-0.1701
Japanese yen	11.900	0.00626597	-0.095000	-0.0071
U.K. pound	0.085946	0.966995	0.204177	0.0170
U.S. dollar	0.58252	0.713255	0.170000	0.0706
			Total	0.1250
			Floor for SDR Interest Rate	0.050
			SDR Interest Rate 3/	0.125

1/ SDR per currency rates are based on the representative exchange rate for each currency. Chinese renminbi refers to the name of the currency, while Chinese yuan refers to the currency unit.

2/ Interest rate on the financial instrument of each component currency in the SDR basket mentioned in paragraph 28.

3/ On October 24, 2014, the Executive Board amended the rule for setting the SDR interest rate, establishing a floor of 0.050 percent.

Figure 8. SDR Interest Rate and Components
(in basis points)



Sources: IMF Finance Department; U.S. Treasury; Bank of England; European Central Bank; Bank of Japan; and China Central Depository and Clearing Co.

1/ The benchmark rate for the euro was the Eurepo rate until December 31, 2014. Since January 1, 2015, the benchmark rate is now 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.

The SDR interest rate is determined weekly based on a weighted average of representative rates on short-term government securities in the money markets of the SDR basket currencies, with a floor of 5 basis points since October 2014.

29. No changes are proposed to the instruments representing the five SDR basket currencies in the interest rate basket. Staff has assessed the appropriateness of the instruments in the SDR basket against the Board-approved criteria discussed in paragraph 27 and found that all five instruments continue to meet the criteria. Also, following the standard practice in SDR valuation reviews, staff consulted with the authorities issuing the currencies in the current SDR basket regarding the appropriate benchmark rates to use in the calculation of the SDRi based on Board-approved criteria mentioned above. The authorities' views are aligned with those of staff.

30. Meanwhile, staff will continue to monitor SDRi instruments and underlying markets.

- Due to the absence of a single representative interest rate for the euro area in the SDRi, changes (in particular, downgrades) in credit ratings of euro area members could potentially impact the representativeness of the current euro-area rate, which relates to sovereigns rated AA and above by Fitch. However, as the European Union (EU) emerges as a more significant borrower on the capital markets (e.g., via the European Commission to finance the NextGenerationEU program), future reviews could consider the feasibility of including a single euro-area benchmark rate, if warranted by the development of EU institutions' debt issuance strategy in the coming years.
- The three-month Treasury market of the Chinese renminbi has seen a higher frequency and volume of issuances,²⁰ along with the growing policy rate transmission via the bond market, strengthening the link between the instrument and the underlying money market conditions (See Box 6).²¹ However, some gaps remain compared to more mature bond markets, as identified in the 2015 SDR valuation review.²² Future reviews should continue to monitor these gaps and relevant reform progress.

OPERATIONAL ISSUES

This section covers operational issues related to hedging of SDR positions and operations in the RMB market, building on the discussions in previous SDR valuation reviews and the findings of a recent survey of SDR users.

A. Hedging and SDRi Reset Frequency

The 2015 and 2010 SDR valuation reviews discussed possible difficulties for the replication of the SDRi that could arise from the divergence between the SDRi reset frequency (weekly) and the maturity of the underlying instruments (three months). Survey results suggest that most SDR users do not consider this divergence or differences in the sources and timing of data collection for SDR exchange rates to hamper their hedging operations.

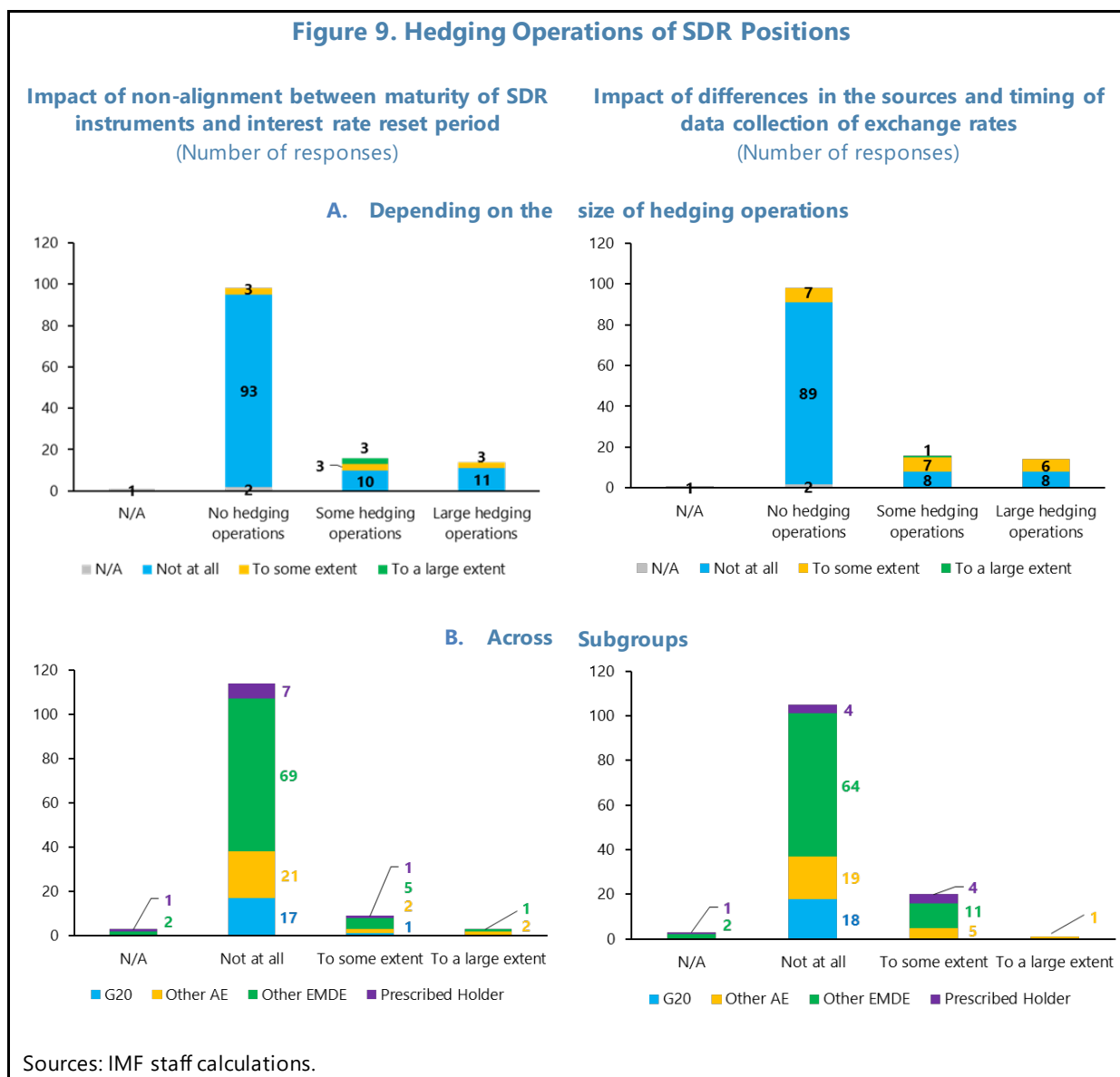
²⁰ From issuance only in the last quarter of the year in 2015 to weekly issuance throughout the year.

²¹ See Chapter 3 in A. Schipke, M. Rodlauer and L. Zhang, [The Future of China's Bond Market](#), IMF (2019)

²² These include both limited market depth and liquidity and limited lead time for announcing issuance volumes. See Chapter 3 in A. Schipke, M. Rodlauer and L. Zhang, [The Future of China's Bond Market](#), IMF (2019)

31. A survey conducted among SDR users indicates that relatively few SDR users hedge their positions and most report facing no operational challenges (Figure 9).²³ In particular, only around one quarter of total respondents, including around half of the prescribed holders, report undertaking operations to hedge their SDR positions. Among respondents undertaking hedging operations, most (70 percent) report that their operations are not at all hampered by the non-alignment between the maturity of SDRi instruments and the SDRi reset period and just over half report no operational challenges arising from differences in the sources and timing of data collection for SDR exchange rates.

²³ The survey was sent to all SDR department participants, or their currency union's central bank, as well as to prescribed holders of SDRs. It was conducted between January 22 – February 22, 2022. The survey questionnaire is in Annex IV. The response rate was 72 percent and respondents are broadly representative of different country income groups: 33 are from advanced economies, including 8 from G20 countries; 87 from EMDEs, including 10 from G20 countries and 22 from LICs, and 11 from prescribed holders. Respondents account for 86.1 percent of total SDR holdings (as of March 1, 2022), comprising 85.7 percent held by member countries and 0.4 percent by prescribed holders.



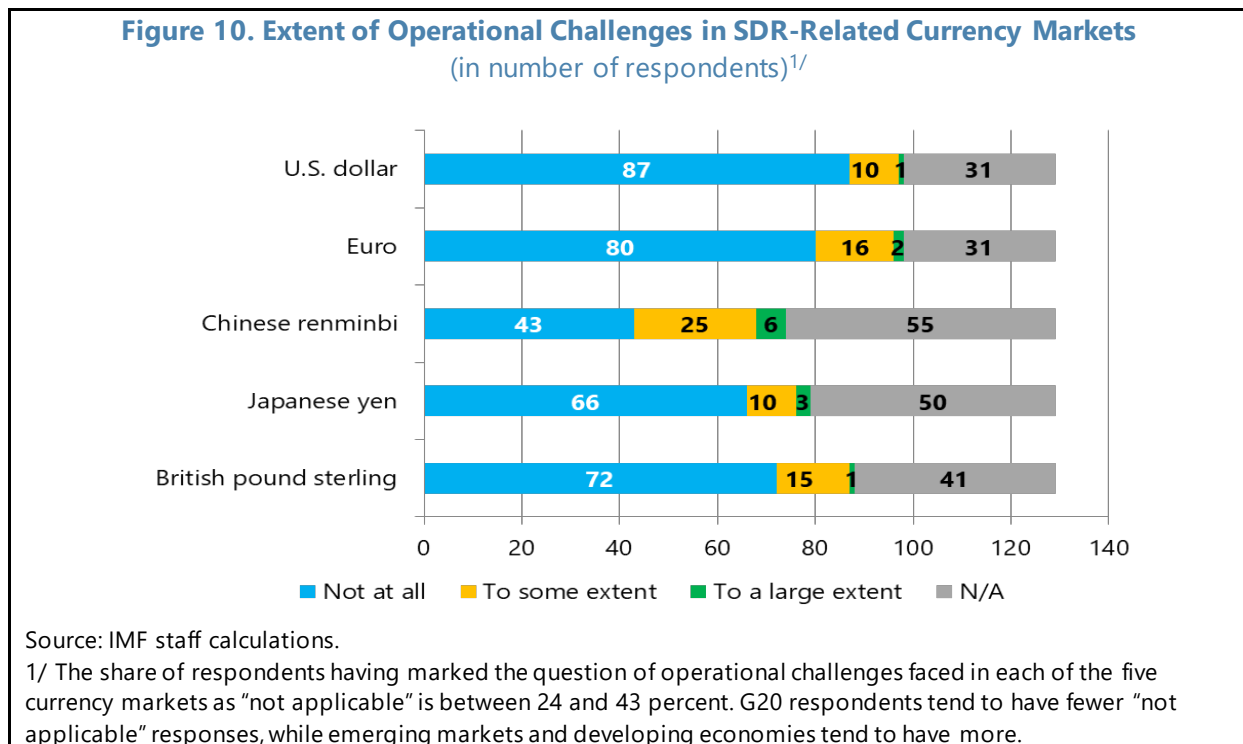
32. Subgroup analysis suggests that experiences with obstacles to hedging activities do not differ substantially across user groups (Figure 9, part B). G20 countries generally do not report having their hedging operations hampered by operational issues—only one of them did report difficulties. For Other Advanced Economies (OAEs) and Other Emerging Market and Developing Economies (OEMDEs), challenges remain small. In particular, a total of 10 (out of 102 or 10 percent of) OAEs and OEMDEs report difficulties associated with SDRi issues and 17 (or 17 percent) report difficulties associated with SDR exchange rate issues. Some issues surfaced for the group of prescribed holders, especially for the SDR exchange rate: just one (out of 9) reports its hedging operations to be affected to some extent by the non-alignment between the maturity of SDRi instruments and the SDRi reset period but four report their hedging operations to be affected to some extent by the differences in the sources and timing of SDR exchange rates data collection.

33. No changes to the current modalities of SDRi reset and SDR exchange rate collection are proposed in this review. This reflects that only a limited number of members and prescribed holders report undertaking hedging operations of their SDR position and most of them do not appear to encounter major operational issues.

B. Operational Issues in SDR Basket Currencies’ Markets

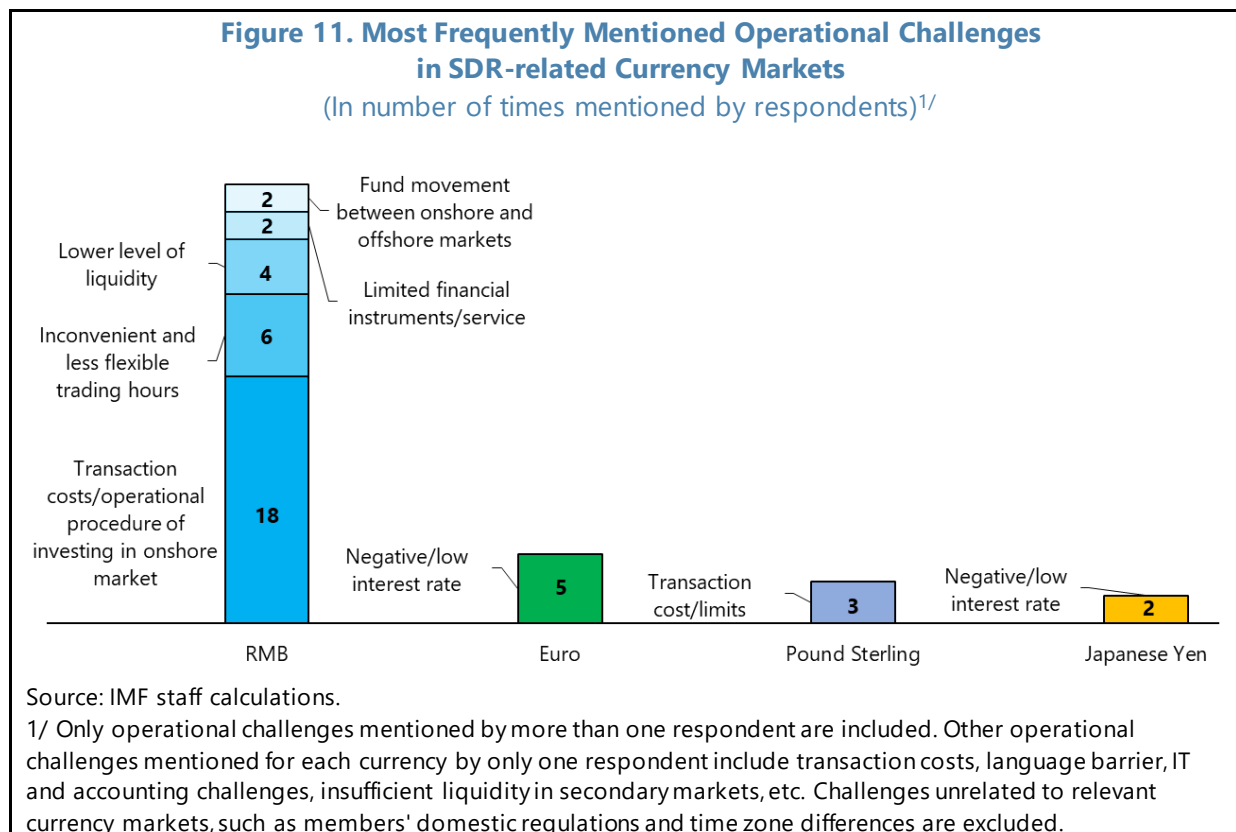
Most SDR users report being active in the five SDR basket currencies’ markets and report facing no or limited operational challenges in these markets. Specific challenges identified by users relate mostly to the Chinese renminbi, but also to some other markets, and are discussed below.

34. A majority of survey respondents are operating across the five SDR basket currencies’ markets for hedging or reserve management purposes without major difficulties. The shares of active users range from 57 percent for the Chinese renminbi to 76 percent for the U.S. dollar and euro markets (Figure 10). Most of these respondents report facing no challenges across the five currency markets.²⁴ The share of total respondents who do report challenges (to some or to a large extent) is the largest for the Chinese renminbi (24 percent of respondents), followed by the euro (14 percent), the British pound (12 percent), the Japanese yen (10 percent), and the U.S. dollar (9 percent).

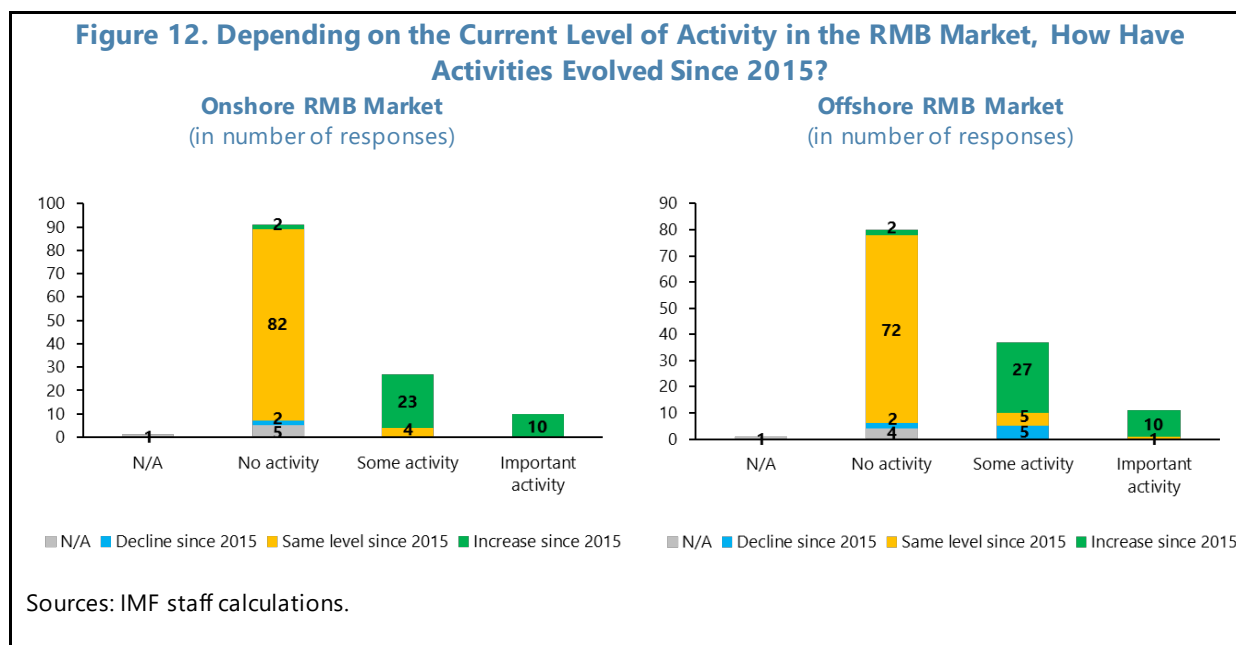


²⁴ For the five SDR basket currencies’ markets, among respondents that report being active, 58 to 89 percent report facing no challenges.

35. Specific operational issues identified by survey respondents as remaining obstacles for their activities vary across markets. For the Chinese renminbi market, these include mainly transaction costs and operational procedures in the onshore RMB market, inconvenient or less flexible trading hours, and lower liquidity compared to more mature markets (Figure 11). In other markets, challenges identified referred to low or negative interest for the case of the euro and the Japanese yen, while transaction costs are a challenge mentioned for the British pound. No common challenges were identified for the U.S. dollar market.



36. A significant share of SDR users have increased operations in the Chinese renminbi markets since the 2015 Review (Figure 12). Around 40 percent of respondents report being active in the offshore market and 30 percent in the onshore. Most indicate that their activities have increased in both markets since 2015 (77 percent of respondents who are active in the offshore market and 89 percent in the onshore market). This pattern holds for respondents from all country groupings and prescribed holders.

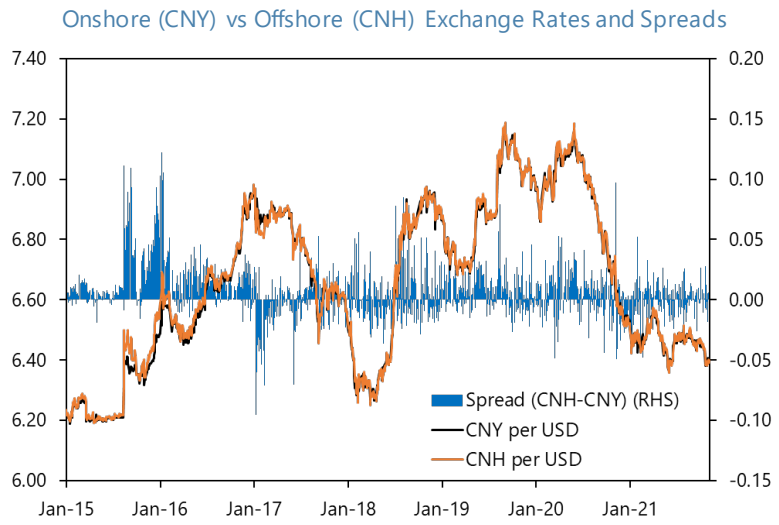


37. The onshore (CNY) and offshore (CNH) renminbi exchange rates have moved closely together and, except for a few spikes, spreads have been contained since 2016. In the 2015 Review, sizeable CNY-CN H divergences, as a result of restrictions to access of the onshore market, were identified as a potential issue that could make operations for SDR users more challenging. However, since the 2015 review, the daily differentials in CNY-CN H exchange rates have decreased in magnitude and these differentials have hovered around zero on an annual average basis (Figure 13).

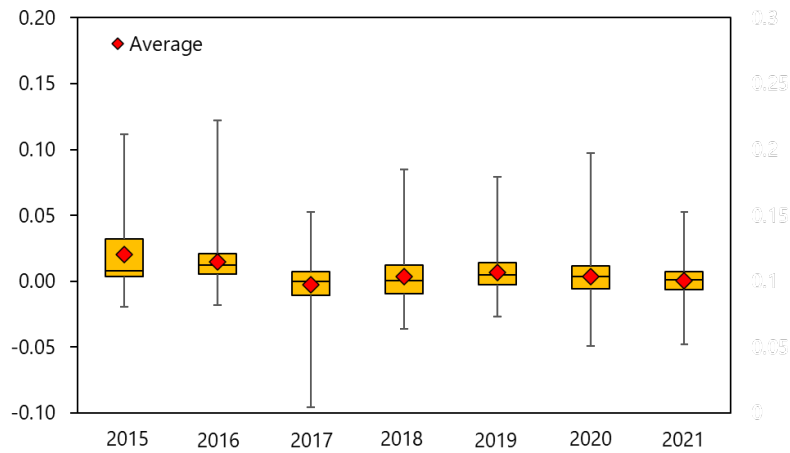
38. Meanwhile, the gradual opening of the Chinese capital market has continued as part of the broader reform agenda (see Box 6). After taking temporary measures to mitigate capital outflows during 2015–16, the Chinese authorities have resumed their policies of a gradual opening of the capital market. Measures implemented since 2018 include increases in daily trading limits in several stock exchanges and in the overall investment limits for qualified foreign institutional investors (QFIs), as well in quotas for Qualified Domestic Limited Partner (QDLP). While most international banks in China conduct their securities businesses with a Chinese partner, some of them have recently been granted full ownership of their Chinese ventures.

39. Continued progress in opening and deepening onshore markets would further increase the attractiveness of the renminbi as a reserve currency. SDR users—the Fund and its members, as well as agents acting on their behalf, and prescribed holders—have been granted unencumbered access to both onshore and offshore markets since 2015 but the need to establish banking relationships and accounts in both the onshore and offshore markets adds operational complexity and costs. More generally, survey responses from SDR users suggest that there remains scope to further simplify operational procedures and reduce transaction costs in China’s onshore market.

Figure 13. Renminbi Spot Onshore (CNY) vs. Offshore (CNH) Exchange Rates and Spreads^{1/}



Distribution of Onshore (CNY) vs Offshore (CNH) Exchange Rate Spreads



Source: IMF Finance Department, CEIC.

1/ The lower chart represents the interquartile range with the line in the middle showing the median value. Whiskers represent the maximum value at the top and minimum value at the bottom.

Box 6. China—Progress in Financial Market Reforms and Data Dissemination, 2015–21

There has been significant progress in addressing renminbi-related operational issues identified in the 2015 review. The Chinese authorities have implemented reforms to improve access to the onshore market, increasingly rely on a market-based system, and enhance data transparency. But some gaps remain compared to more mature markets.

The capital market has been gradually opened to international investors, notwithstanding a temporary tightening of outflow restrictions in 2015 and 2016.

- Confronted with market turbulence in 2015 and 2016, the Chinese authorities implemented measures to mitigate capital outflows by residents and a rapid decrease of foreign exchange reserves. The State Administration of Foreign Exchanges (SAFE) stopped issuing Qualified Domestic Institutional Investor (QDII) quotas in 2015. At the same time, steps were taken to further open the interbank market to foreign central banks or monetary authorities, international financial organizations, and sovereign wealth funds (SWFs). Nonresident foreign financial institutions and SWFs were authorized to issue RMB bonds in the Chinese interbank bond market on a pilot basis. In 2016, some additional measures were taken, which limited capital outflows, including the reduction of banks' reporting threshold for daily cross-border transactions from RMB 200,000 to RMB 50,000 and the requirement that RMB cross-border lending by domestic institutions be subject to approvals.

- The gradual opening of the capital market resumed in 2017–18. Some restrictions were eased and new measures to open the capital markets were introduced. In mid-2017, the Bond connect was launched to allow international institutional investors to trade onshore bonds through Hong Kong SAR. In 2018, daily limits for both the Shanghai-Hong Kong Stock Connect and the Shenzhen-Hong Kong Stock Connect were increased, the Shanghai-London Stock Connect was launched, the quota for Qualified Domestic Limited Partner (QDLP) was increased, and QDII quotas were also revamped. In 2019, the overall investment limit for qualified foreign institutional investors (QFIIs) was increased.¹ In May 2020, the PBC and SAFE jointly issued a rule to remove the long-standing quota limits for QFIIs and Renminbi Qualified Foreign Institutional Investors (RQFIIs) and other measures were taken to promote further opening-up of China's financial market. In both 2020 and 2021, QDII and QDLP quotas were further increased and QDLP quotas were also expanded to more regions (such as Hainan, Guangdong, and Chongqing). The Cross-Boundary Wealth Management Connect Scheme in 2021 enabled residents in the Guangdong province to invest in wealth management products sold by banks in Hong Kong SAR and Macao SAR, and vice versa.

In 2021, reforms were introduced to ease restrictions on international banks' ownership of their securities businesses in China. Previously, international banks had to share the ownership of their securities business in China with a Chinese partner. In August 2021, JP Morgan Chase was the first international bank to take full ownership of its securities venture in China, followed by Goldman Sachs in October 2021. Other international banks (e.g., Credit Suisse) are also currently looking to acquire full ownership of their Chinese ventures.

On the exchange rate and monetary policy fronts, the authorities have also continued with reforms aimed at increasingly relying on a market-based system. During 2015–21, the de facto exchange rate arrangement exhibited some flexibility albeit remaining for the most part within the soft peg classification (see Annual Report on Exchange Arrangements and Exchange Restrictions, AREAER).² The PBC's conduct of monetary policy has also become more market-based since the 2015 SDR valuation review. The PBC has increased the use of the 7-day repo rate as a policy tool and strengthened interbank liquidity management. Since 2019, the PBC has also been conducting Medium-term Lending Facility (MLF) operations to signal medium-term policies. Changes in short-term interest rates have had noticeable impacts on government bond yields of various maturities.³

The Chinese authorities have continued to make progress in enhancing data disclosure since the 2015 Review.

Regarding financial sector surveillance, they further increased the periodicity of data on financial soundness indicators from semi-annual to quarterly in 2019, after moving from annual to semi-annual publication ahead of the 2015 Review. Regarding external sector statistics, the authorities have begun since 2015 to (i) report data for the Coordinated Portfolio Investment Survey (CPIIS), (ii) increase to full coverage data reported to the COFER survey, and (iii) compile and disseminate the International Reserves and Foreign Currency Liquidity Template. Staff is working with the authorities to ensure that compilation standards in the reporting of the template are consistent with guidelines.

1/ Qualified Foreign Institutional Investor (QFII), merged with RMB QFII (RQFII) in 2020, is a policy initiative that allows foreign investors who hold quota to invest directly in Mainland China's bond and equity markets. Under new regulations, QFIIs and RQFIIs are collectively referred to as QFIs.

2/ See <https://www.elibrary-areaer.imf.org/Pages/Home.aspx>, and [appendix.pdf \(imf.org\)](#)

3/ See Chapter 3 in A. Schipke, M. Rodlauer and L. Zhang, [The Future of China's Bond Market](#), IMF (2019).

ENTERPRISE RISKS

40. **Potential enterprise risks associated with this review are strategic and reputational.**

- **Strategic.** Ensuring that the currencies included in the basket and their weights reflect the importance of currencies in international trade and financial transactions is critical to maintain the attractiveness of the SDR as an international reserve asset and its relevance as a unit of account for the Fund and other international financial institutions. A relatively fast pickup in the use of non-SDR basket currencies or alternative stores of value could undermine the standing of the SDR as a basket. Close monitoring of developments in the use of non-SDR basket currencies, cryptoassets, and CBDCs in international transactions and regular and transparent reviews of the basket and the valuation methodology will continue to help mitigate this risk.
- **Reputational.** As a reserve asset created by the Fund, the SDR and its method of valuation reflect directly on the reputation of the Fund. As noted above, regular and transparent reviews approved by the Executive Board representing the entire membership are an important safeguard against reputational risk.

TRANSITION TO THE NEXT BASKET, TIMING OF THE NEXT REVIEW, AND ISSUES FOR DISCUSSION

41. From an operational perspective, it is desirable to provide adequate notice to SDR users on the new SDR currency and interest rate baskets. Accordingly, the Executive Board has generally taken its decision on SDR valuation well in advance of the date when the revised SDR currency and interest baskets become effective.

42. Currency amounts for the new SDR basket will be calculated on an illustrative basis each month following the Board decision and final amounts will be set on July 29. Consistent with the practice of past reviews, illustrative currency amounts will be published once in May and June and every week in July 2022, the month preceding the August 1 entry into effect of a new basket, to facilitate portfolio adjustments by SDR users. The decision on weights, and final currency amounts will be published on the last business day before the August 1, 2022 entry into effect of a new basket.

43. It is proposed that the next review of the SDR valuation basket take place in mid-2027. The regular five-year frequency, has generally worked well, providing certainty and predictability to the benefit of users of the SDR and SDR-denominated assets. Nonetheless, as Directors agreed at the 2015 Review, the Board could decide to complete the review at an earlier (or later) date if warranted by financial developments in the interim.

44. Directors may wish to address the following issues in their comments:

- Do Directors support maintaining the current method of valuation, while formalizing the current practice and accepted statistical method of dealing with data gaps by using available data for the time period of interest?
- Do Directors support the updated SDR weights, as calculated by the current methodology, to come into effect on August 1, 2022?
- Do Directors agree the next SDR valuation review to take place on a five-year basis, to be concluded before end-July 2027?

Proposed Decision

The following decision, which may be adopted by a 70 percent majority of the total voting power, is proposed for adoption by the Executive Board:

1. *Decision No. 15891-(15/109), adopted November 30, 2015*, as amended, on the method of valuation of the Special Drawing Right (the "Decision"), shall be further amended as follows:
 - a. Paragraphs 3, 4 and 5 of the Decision shall be renumbered 4, 5 and 6, respectively, and the references to paragraphs 3 and 4 in the Decision shall be amended to refer to paragraphs 4 and 5, respectively.
 - b. The following paragraph 3 shall be added to the Decision:
3. In the event that the data needed to assess the variables set out in Paragraphs 2(a) to 2(d) is not readily available for one or several of the currencies for the period under consideration, the data gaps shall be addressed consistent with accepted statistical methods as follows:
 - (a) in cases where year-end data for a calendar year of the relevant five-year period is not available, the latest available data for a currency for that same year would be used; and
 - (b) in cases where data for a currency for one or more calendar years of the relevant five-year period is not available, the data available in that five-year period would be used for that currency."

- c. References in the new paragraph 5 of the Decision to “October 1, 2021, and thereafter on the first day of each subsequent period of five years” shall be revised to read “August 1, 2027 and thereafter on the first day of each subsequent period of five years.”
2. The Executive Board, having reviewed the list and the weights of the currencies that determine the value of the special drawing right (SDR) in accordance with *Decision No. 15891-(15/109)*, adopted November 30, 2015 as amended, decides that, with effect from August 01, 2022, the list of the currencies in the SDR valuation basket shall remain the same, and the weight of each of these currencies to be used to calculate the amount of each of these currencies in the basket will be as follows:

Currency Weight (in percent)

U.S. dollar	43.38
Euro	29.31
Chinese RMB	12.28
Japanese yen	7.59
Pound sterling	7.44

Annex I. Data Issues

This annex discusses definitions, data sources, and methodological issues relating to indicators used in both the currency selection criteria and the calculation of the currency weights in the SDR basket. The first section describes the indicators used in the currency selection criteria, the second section describes the data required to calculate the currency weights, and the third section explains the treatment of data gaps.

A. Indicators Used to Assess the Currency Selection Criteria

The exports criterion is assessed using the following data (Table 1, Figure 1, and Table AI.1):

- **Data on merchandise exports, services, and income credits (primary and secondary).** The data source is the WEO database — April 2022 vintage and WEO BPM6— and the ECB's Statistics Bulletin for euro area's secondary income credits. Euro area exports obtained from the WEO and from the ECB exclude intra-euro area exports, in line with the currency-based approach. China's exports are assessed at the level of the Mainland, in line with the currency-based approach, since Hong Kong SAR, Macao SAR, and Taiwan Province of China have their own currencies and monetary authorities.

The freely usable criterion uses the following data:

- **Official foreign exchange (FX) reserves (Table 2)** are taken from the IMF's *Currency Composition of Official Foreign Exchange Reserves (COFER)* survey, where they are defined as monetary authorities' claims on non-residents usable in the event of balance of payment needs. The reserve holdings data series in U.S. dollars are converted to SDRs using end-of-period exchange rates.
- **International debt securities (IDS; Table 3)** outstanding are from the BIS and 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). More specifically, a security is defined as international if its registration domain, listing place, or governing law differs from the residence of the issuer. Following the member-based approach for the freely usable assessment, RMB-denominated IDS are assessed with staff calculations using BIS supplementary data, where Hong Kong SAR, Macao SAR, and Taiwan Province of China are treated as domestic, excluding securities issued by residents of each of these locations or the Mainland if the registration domain, listing place, and governing law are all from one of these locations. For the euro, the data includes euro-denominated debt securities if registration domain, listing place, or governing law belongs to a euro-area country other than the residency of the issuer, and is therefore in line with the member-based approach.
- **International banking liabilities (IBL; Table 4)** are defined by the BIS as liabilities to non-residents denominated in any currency plus liabilities denominated in foreign currency to domestic residents. Following the member-based approach for the freely usable assessment, RMB-denominated IBL are assessed where Hong Kong SAR, Macao SAR, and Taiwan Province of

China are treated as domestic, excluding IBL between residents of these economies and between residents of these economies and residents of the Mainland. Since reporting RMB-denominated IBL to the BIS is not mandatory, staff estimates RMB-denominated IBL based on national sources, Haver Analytics, and BIS supplementary data. The estimate includes data from the PBC on RMB-denominated cross-border IBL, RMB deposits in Taiwan Province of China from Haver Analytics, and RMB deposits in Singapore published by the Monetary Authority of Singapore. Staff calculations using BIS supplementary data include data from a number of jurisdictions that report RMB-denominated liabilities to the BIS, and data for non-reporting jurisdictions. For the euro, the data includes intra-euro area positions in line with the member-based approach.

- **Foreign exchange turnover (Table 5)** is defined as the gross value of all deals concluded during the month of April 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, last conducted in April 2019, is the only comprehensive and reliable data source for global FX market turnover. The survey compiles the nominal or notional amounts of executed spot and derivative FX transactions from about 1,300 reporting financial institutions from 53 jurisdictions.

All the data described above is converted to SDR terms, using period average exchange rates for flow variables and end-of-period exchange rates for stock variables.

B. Indicators Used in the Calculation of Proposed Currency Weights

The proposed currency weights in Table 6 are calculated using the following data for 2017–21, in line with a currency-based approach (See Tables A1 and A2):

- **Exports** of goods services and income credits; same as above.
- **Official foreign exchange reserves (Table 2)** are used as the measure of the “total value of the balances of currencies held by monetary authorities” (paragraph 2 of the 2000 Decision) as in the past.
- **Foreign exchange turnover (Table 5)** uses total turnover for 2019, the only year falling into the five-year period relevant for this review, for which data from the BIS Triennial Central Bank Surveys is available.
- **International debt securities (IDS, Table 3)**; same as above, except euro-denominated IDS excludes debt securities issued by euro area residents if registration domain, listing place, and governing law belong to a euro area country. This adjustment excludes domestic issuance in the domestic market and adds on euro-denominated portfolio debt securities liabilities to non-residents, provided by the European Central Bank. For the RMB, Hong Kong SAR, Macao SAR, and Taiwan Province of China are treated as international.
- **International banking liabilities (IBL, Table 4)**; same as above, except euro-denominated IBL exclude intra-euro area holdings, using data provided by the BIS. The IBL estimates for the RMB are based on staff calculations using data for RMB-denominated cross-border IBL reported to the BIS by the PBC and, local and cross-border IBL reported by several other jurisdictions, RMB

deposits in Taiwan Province of China from Haver Analytics, and RMB deposits in Singapore reported by the Monetary Authority of Singapore. Hong Kong SAR, Macao SAR and Taiwan Province of China are treated as international.

C Data Gaps

Currency weights under the current formula are calculated using annual averages and year-end data over the past five years but annual data may not always be available for all currencies across all the variables used in the formulas. Previous reviews have relied on available data for the relevant 5-year periods of interest to deal with data gaps. The data gaps in the current review are: i) lack of multiple data points on annual FX turnover on a comparable basis, ii) lack of end-2021 IBL data; (iii) lack of the 2021 figure for IDS in euro, excluding intra euro area positions.

The common practice and accepted statistical method to deal with data gaps is to use data that is available for the time period of interest, and, where possible, take the average over the period with the data available. For example, in the 2000 review, end-1999 reserves were used instead of a five-year average in the currency weight calculations, since the euro was a new currency with only one year of observations at that time.

For the data gaps described above, the calculations presented in Section VI follow this approach:

- **FX turnover.** For each currency, the figure for 2019 is used as the average for the period 2017–21 for each currency (Table AI.2).
- **IBL data for 2021.** In the absence of end-2021 figures, end-September 2021 figures are used instead in the calculation of the average for the period 2017–21 for each currency.
- **IDS in euro, excluding intra-euro positions.** In the absence of the 2021 figure for IDS in euro excluding intra-euro area positions, an estimate is calculated based on the available average for 2017-2020 of the proportion of the ECB's broad measure of IDS, which excludes intra-euro positions, to the corresponding BIS measure.

Table AI.1. Variables Used in Currency Selection Criteria and in Currency Weighting

Variable	Source/Vintage	Data Type	Coverage	Other Explanations	
				For Assessing the Freely Usable Currency Criterion	For the exports Criterion and Currency Weighting
Exports	IMF WEO April 2022 vintage and BP6; ECB, Statistics Bulletin (April 2022).	Flow. Annual exports are the sum of goods, services and income as defined in BPM6. Billions of USD. Converted to SDR using average exchange rates for each year.	2017–21 Annual data is used. Five-year averages of amounts and shares are presented.	Not applicable.	For the euro, exports for "Euro Area" are used, intra-euro area exports are netted out. For the RMB, exports for Mainland China (CH) are used.
Reserves	IMF COFER, March 31, 2022	Stock. Allocated official reserves. Billions of USD, converted to SDR using end-of-year exchange rates.	2017–21 December data is used.		
International Banking Liabilities (IBL)	BIS, Locational Banking Statistics, previously published by the BIS as Tables 5A and 5D. As the BIS no longer publishes these tables, BIS staff provided them to IMF staff on March 7, 2022.	Stock. Cross-border liabilities and local positions in foreign currency. Billions of USD, converted to SDR using end of period exchange rates.	2017–21 December data is used for all years, except 2021 for which 2021Q3 data is used.	For the euro, positions between euro area countries are not netted out because the member-based approach is used. For RMB, IBL from CH, HK, MO, and Taiwan Province of China (TW) are included and RMB-denominated IBL between them are excluded. From the total reported IBL for RMB (including RMB-denominated deposits in Singapore, TW, and other jurisdictions based on staff calculations using BIS supplementary data), RMB-denominated liabilities to residents in HK, MO and TW are subtracted. As a memo item, Table 4 shows the figures with HK, MO, and TW treated as international.	For the euro, intra euro positions are netted out in line with the currency-based approach. For the RMB, figures with HK, MO, and TW treated as international are used in line with the currency-based approach.
<i>RMB-denominated IBL of Taiwan Province of China</i>	Haver Analytics.	Stock. Domestic and Offshore Banking Units: RMB Deposits. Millions of RMB, end of quarter exchange rates are used to convert it to USD.	2017–21 December data is used for all years, except 2021 for which 2021Q3 data is used.		

Table AI.1. Variables Used in Currency Selection Criteria and in Currency Weighting (concluded)

<i>RMB-denominated IBL of Singapore</i>	Monetary Authority of Singapore, www.mas.gov.sg .	Stock. Level of RMB deposits in Singapore. Billions of RMB, end of quarter exchange rates are used to convert it to USD.	2017–21 December data is used for all years, except 2021 for which 2021Q3 data is used.		
International Debt Securities (IDS)	BIS, Data Warehouse at https://stats.bis.org and supplementary data provided by BIS staff on March 7, 2022. ECB, International Role of the Euro, Table A4/ June 2021.	Stock. International Bonds, Notes and Money Market Instruments. End-of-year data is used. Billions of USD. Converted to SDR using end-of-year exchange rates.	2017–21 December data is used.	For RMB, IDS for CH, HK, MO, and TW are included; any IDS issued between them are excluded (with staff calculations using BIS supplementary data). Table 3 (memo) shows the published IDS which treats HK, MO, and TW as international.	For the euro, the ECB's broad measure for international debt securities is used. This measure excludes all intra-euro area issuance. As the figure for 2021 is not available, a proxy based on the 2017–20 average is used. For the RMB, figures derived by treating China's territories as international are used.
Foreign Exchange Turnover (FXT)	BIS, Triennial Survey/ September 2019.	Flow. Average of daily transactions in April. Billions of USD. Amounts are converted to SDR using end-April exchange rates.	2019		

Table A1.2. Data Used in the Proposed Currency Weights 1/
(in billion SDR, unless otherwise specified)

A. Exports									
Country	2017	2018	2019	2020	2021	Average 2017-21	Share (in percent)	2015 review figures 2/	
								Average 2010-14	Share (in percent)
United States	2,559.2	2,679.4	2,759.3	2,339.5	2,671.3	2,601.7	26.2	1,984.5	26.1
Euro area	3,283.4	3,543.0	3,553.2	3,224.8	3,704.1	3,461.7	34.8	2,662.2	34.9
United Kingdom	776.0	849.9	865.3	705.7	795.6	798.5	8.0	706.5	9.3
Japan	847.5	886.9	904.7	790.9	861.6	858.3	8.6	730.9	9.6
China, Mainland	1,981.3	2,081.7	2,120.9	2,168.5	2,722.3	2,214.9	22.3	1,533.1	20.1
Total						9,935.2		7,617.2	
B. Reserves									
Currency	2017	2018	2019	2020	2021	Average 2017-21	Share (in percent)	Average 2010-14	Share (in percent)
US Dollar	4,410.2	4,763.2	4,863.7	4,853.9	5,063.7	4,791.0	64.8	2,383.4	65.3
Euro	1,418.0	1,594.5	1,648.4	1,754.1	1,776.9	1,638.4	22.1	931.0	25.5
Pound sterling	319.3	341.4	371.4	389.8	411.7	366.7	5.0	150.7	4.1
Japanese yen	344.3	400.4	469.9	496.7	480.0	438.2	5.9	147.1	4.0
Renminbi	86.7	146.0	155.1	188.6	240.1	163.3	2.2	40.5	1.1
Total						7,397.6		3,652.6	
C. Foreign Exchange Turnover (FXT)									
Currency					2019	Average	Share (in percent)	Average 2010-14	Share (in percent)
US Dollar					2,099.1	2,099.1	57.2	1,328.6	54.8
Euro					767.4	767.4	20.9	552.4	22.8
Pound sterling					304.1	304.1	8.3	189.2	7.8
Japanese yen					399.5	399.5	10.9	328.9	13.6
Renminbi					102.7	102.7	2.8	25.5	1.1
Total						3,672.8		2,424.6	
D. International Banking Liabilities (IBL)									
Currency	2017	2018	2019	2020	2021	Average 2017-21	Share (in percent)	Average 2010-14	Share (in percent)
US Dollar	12,172.9	12,443.0	12,872.8	13,550.4	14,324.5	13,072.7	64.9	9,240.5	59.2
Euro	4,327.1	4,499.0	4,414.4	5,051.0	5,008.5	4,660.0	23.1	4,002.3	25.7
Pound sterling	1,048.3	1,051.0	1,112.2	1,247.7	1,284.4	1,148.7	5.7	1,014.2	6.5
Japanese yen	636.1	696.9	725.7	736.4	743.1	707.7	3.5	565.6	3.6
Renminbi	483.7	485.9	485.9	637.0	731.6	564.8	2.8	776.0	5.0
Total						20,153.9		15,598.5	
E. International Debt Securities (IDS)									
Currency	2017	2018	2019	2020	2021	Average 2017-21	Share (in percent)	Average 2010-14	Share (in percent)
US Dollar	7,445.3	7,954.4	8,389.9	8,437.2	9,377.2	8,320.8	53.3	5,019.0	42.9
Euro	5,036.8	5,113.4	5,307.0	5,823.1	5,948.2	5,445.7	34.9	4,852.5	41.5
Pound sterling	1,362.8	1,354.8	1,478.0	1,479.0	1,580.0	1,450.9	9.3	1,378.6	11.8
Japanese yen	298.7	318.8	325.7	311.1	286.2	308.1	2.0	408.9	3.5
Renminbi	71.8	77.9	70.9	78.4	88.2	77.4	0.5	43.5	0.4
Total						15,602.9		11,702.6	

Sources: IMF, World Economic Outlook; IMF, COFER Survey; ECB, Statistics Bulletin; BIS Locational Banking Statistics; BIS Quarterly Review; BIS Triennial Survey; People's Bank of China (PBC); Monetary Authority of Singapore; Haver Analytics; and IMF staff calculations.

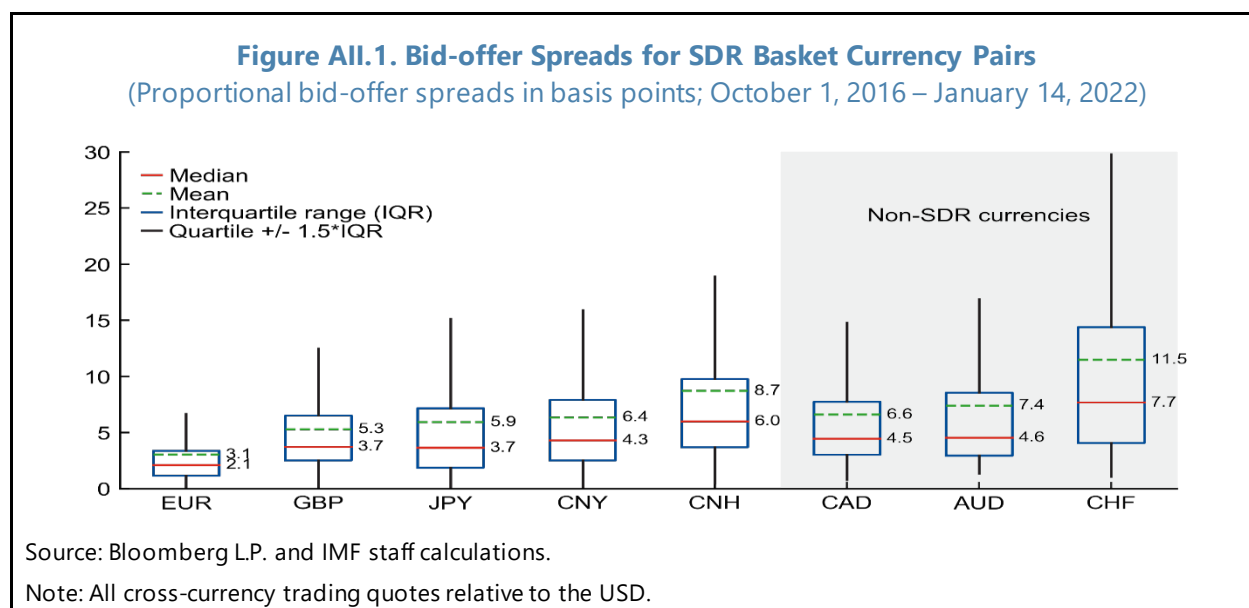
1/ Exports data last updated on April 11, 2022; reserves data last updated on April 5, 2022; IBL and IDS data last updated based on data downloaded from <https://stats.bis.org> and supplementary data received from BIS staff on March 7, 2022.

2/ Figures are shown for comparison; they are as in the 2015 SDR valuation review paper, Table A3.

Annex II. Analysis of Liquidity of SDR Basket Currencies

SDR basket currencies remain liquid and widely traded at a reasonable cost, as measured by proportional bid-offer spreads. Using the same statistical approach as in the 2015 Review, average proportional bid-offer spreads have remained mostly in the low single digits for SDR basket currencies. Bid-offer spreads for the RMB, especially in the onshore market, have been on a declining trend since the RMB's inclusion in the SDR basket. Despite some temporary market turmoil, liquidity in the SDR basket currencies was resilient during the COVID-19 crisis episode.

This annex provides a complementary analysis of FX liquidity data to help guide the assessment of whether SDR basket currencies remained liquid since the current SDR basket became effective on October 1, 2016. Gauging the cost of transacting in the spot foreign exchange market for SDR basket currencies (the U.S. dollar, the euro, the Chinese renminbi, the Japanese yen, and the British pound sterling), which indicates the liquidity of these markets, helps assess the degree to which these currencies have remained widely traded—i.e., they can be exchanged in markets for another currency to meet a member's balance of payments need. This analysis also included, as a reference, the cost of trading some non-SDR basket currencies—such as the Australian dollar, Canadian dollar, and Swiss franc—against the U.S. dollar. The analysis is based on daily bid-offer data from Bloomberg L.P. for the period of October 1, 2016 through January 14, 2022.¹



¹ The period comprises the effectiveness date of the current SDR basket through the latest data available prior to when this exercise was conducted.

Box All.1. Measuring the Proportional Bid-Offer Spread

A market can be thought of as liquid if the proportional quoted bid-offer spread is low, which is indicative of a low cost of executing trades. The proportional quoted bid-offer spread (L) is computed by the below formula, letting O, B, and M indicate the offer, bid, and mid quotes, respectively. Returns are multiplied by 10,000 to obtain basis points as the unit of measurement.^{1/}

$$L_{basis\ points}^{OB} = 10,000 * (P^O - P^B) / P^M, \text{ where} \\ P^M = (P^O + P^B) / 2$$

We use daily data on currency pairs from Bloomberg L.P. terminal for the period October 1, 2016 through January 14, 2022. These data represent a widely accepted standard for bid-offer prices in currency pairs compiled by Bloomberg L.P., known as the Bloomberg Generic Composite (BGN) rate. To compute bid-offer prices, BGN compiles bid and offer quotes from hundreds of sources, including money-centers and banks, broker-dealers, inter-dealer brokers, and other trading platforms. BGN draws on data from the Monday morning market open in New Zealand (or early Sunday afternoon in New York City) and closes on 5pm EST on Fridays. Daily data are computed as the closing bid and offer prices received from Bloomberg L.P.'s sources reported at the 5pm New York City closing time of a given trading day.

Results should be interpreted with caution, as the Bloomberg platform is only representative of a portion of the global FX market. Additionally, while Bloomberg L.P.'s method of computing bid-offer spreads in spot FX markets is widely accepted as being representative of prevailing market conditions by market participants, it could have features that bias the results. Staff did not have access to Bloomberg L.P.'s compilation algorithm. However, staff is not aware of any evidence of systemic bias in the Bloomberg L.P. data.

^{1/} For instance, assuming for a given day a median securities prices bid and offer prices are 100.00 and 100.25, respectively, then the proportional bid-offer spread for that day is about 25 basis points ($L^{OB} = 10,000 * (100.25 - 100.00) / [(100.25 + 100.00) / 2] = 25$ basis points).

The cost of executing trades in SDR basket currencies, as measured by proportional bid-offer spreads (see Annex Box 1), remains low and broadly in line with the findings of the 2015 SDR Valuation Review.² Average bid-offer spreads of SDR basket currencies over the sample period hovered under ten basis points.³ Furthermore, the 180-day moving average proportional bid-offer spread also remained low—under fifteen basis points for the entire sample period for all SDR basket currency pairs—broadly in line with the findings presented in the 2015 SDR Valuation Review (see Annex Figures 1 and 2). Notably, the data in the sample period include the March 2020 COVID-19-related episode of severe

² The analysis does not include market volumes—i.e., bid-offer sizes of dealers' price quotes. It is possible that large trades could create illiquidity in the market, though Bloomberg L.P.'s aggregation includes many dealer quotes.

³ In the 2015 *SDR Valuation Review*, spreads averaged under 10 basis points during the period studied.

market stress, which appears to have had a relatively more marked temporary impact on trading in the British pound and the Japanese yen (see Annex Figures 2 and 3). Bid-offer exchange rate spreads in onshore RMB-U.S. dollar (CNY to USD) trades as well as their volatility have been on a steadily declining path during the entire analysis period, with average spreads and liquidity distributions broadly comparable to other SDR basket currencies. While average spreads in the offshore RMB-U.S. dollar (CNH to USD) market and their volatility have been relatively higher during the analysis period, they have also been trending down—albeit less markedly than the onshore RMB-U.S. dollar (CNY to USD) currency pair. These results suggest that, on average, RMB-U.S. dollar spot exchange rate liquidity has improved since the 2015 Review (see Annex Figure 2).

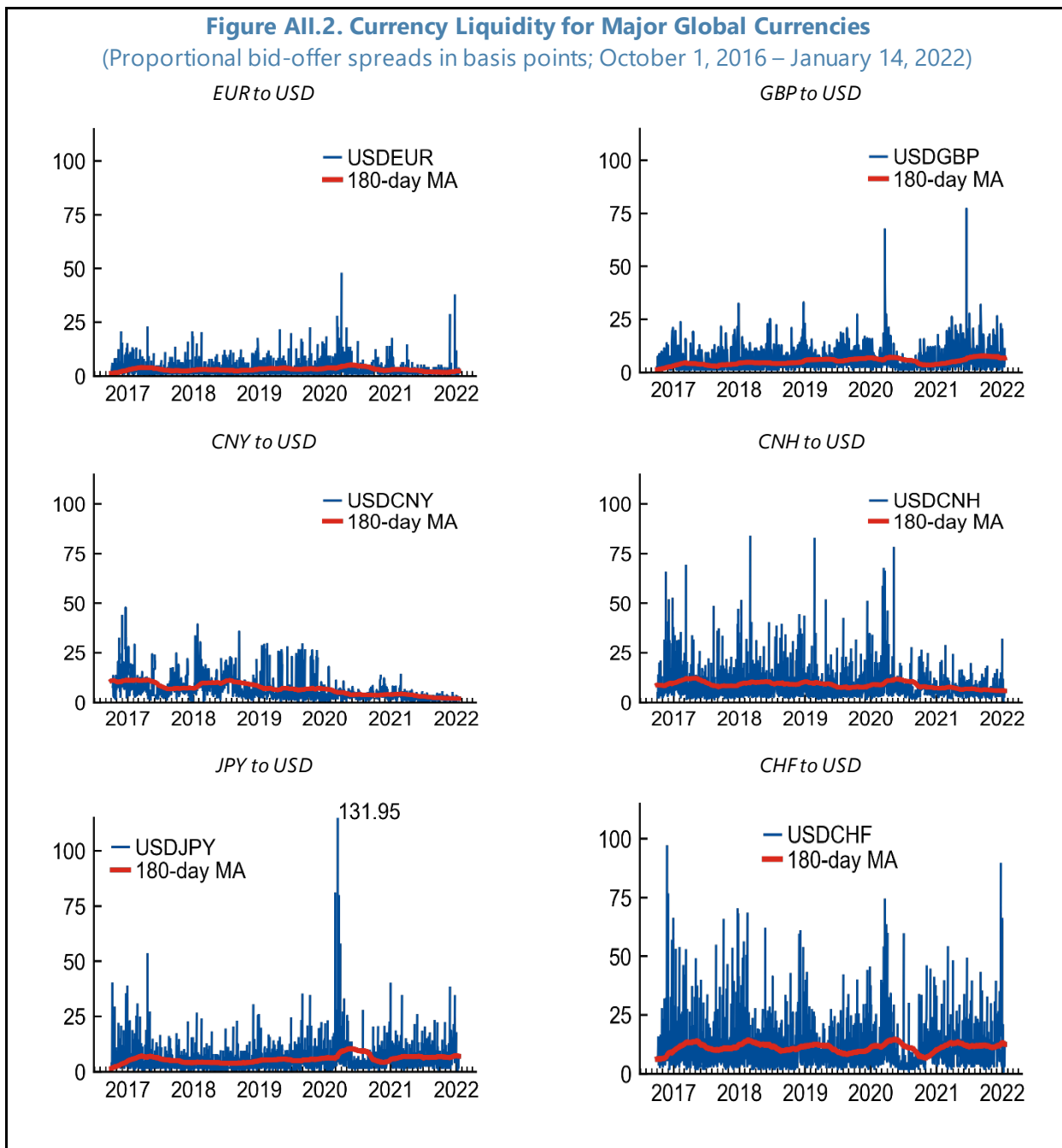
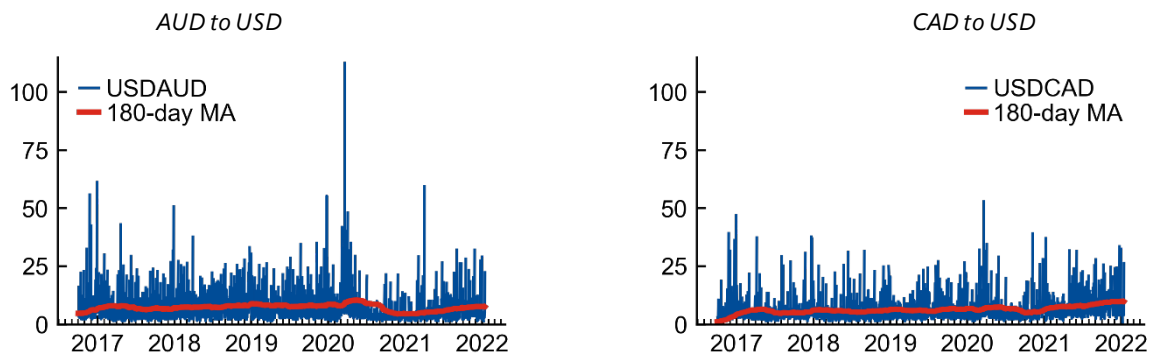


Figure All.2. Currency Liquidity for Major Global Currencies (Concluded)



Source: Bloomberg LP and IMF staff calculations

Note: All cross-currency trading quotes relative to the USD. MA = moving average.

Figure All.3. Analysis of the COVID-19 Shock
 Proportional bid-offer Spreads for SDR Basket Currency Pairs
 (In basis points; February 17, 2020 – May 17, 2020)

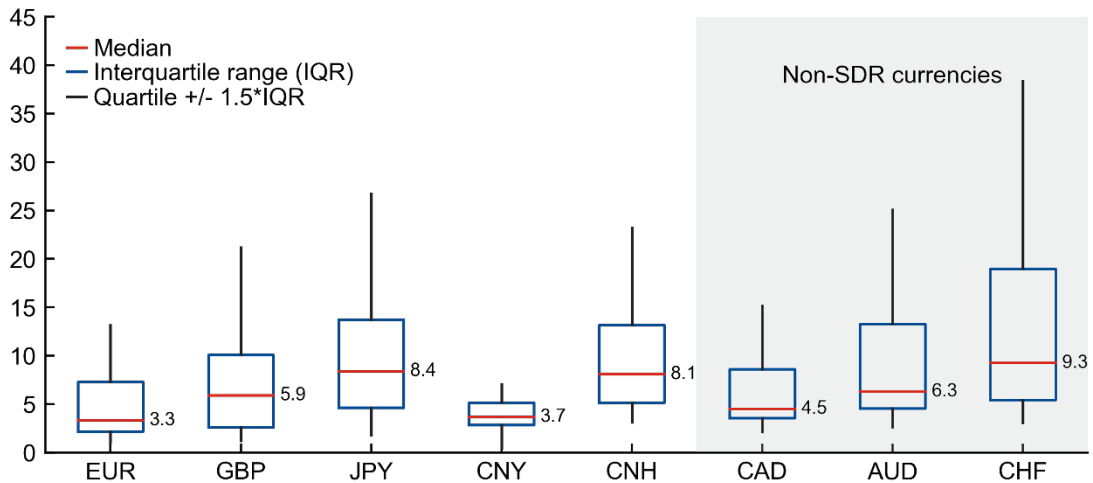


Figure AII.4. Proportional bid-offer Spreads for SDR Basket Currency Pairs
 (In basis points, 5-trading day moving average; February 17, 2020 – May 17, 2020)

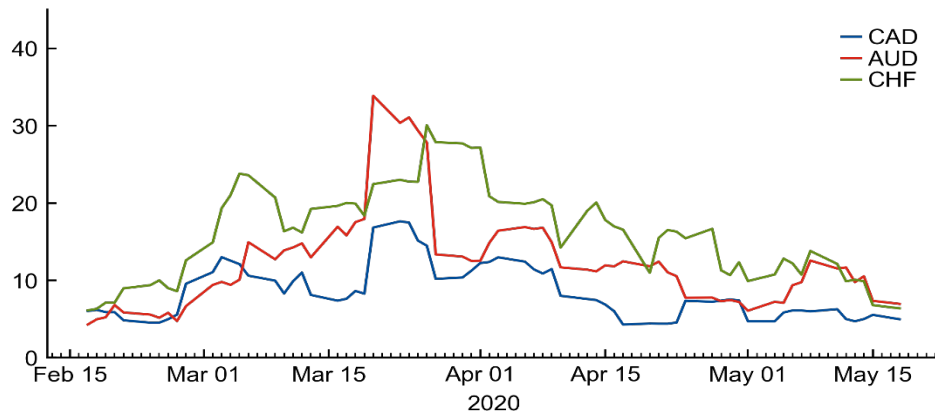
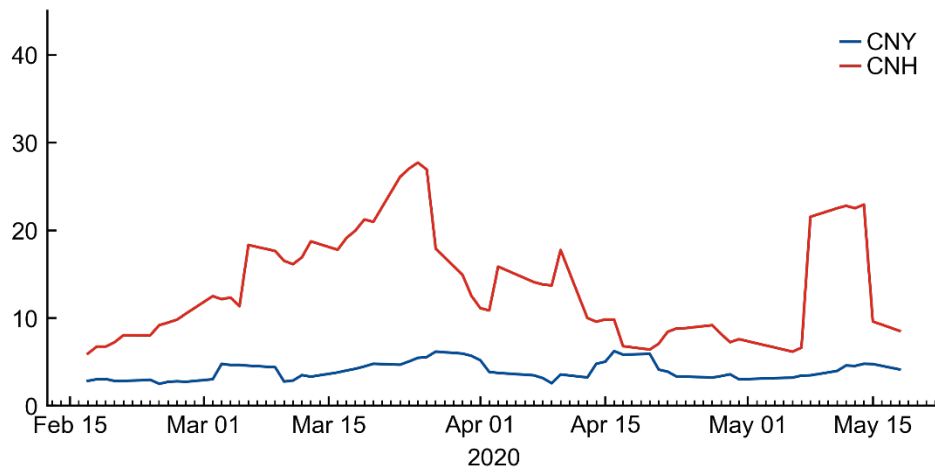
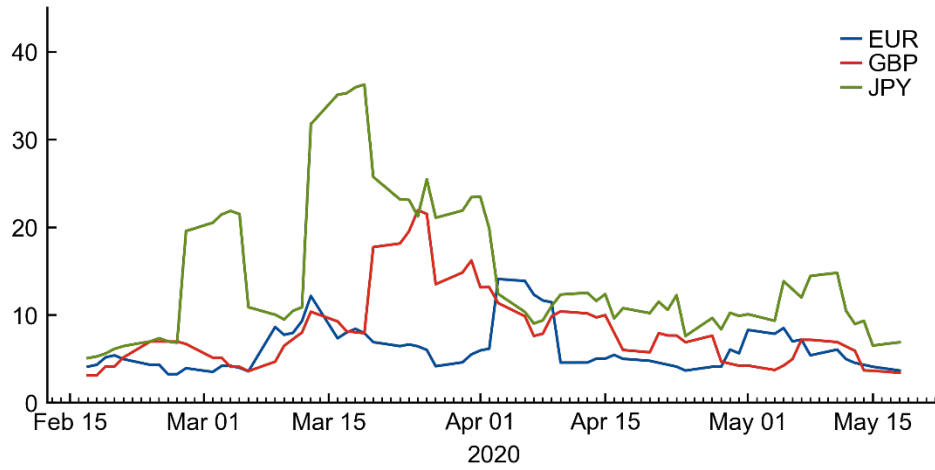
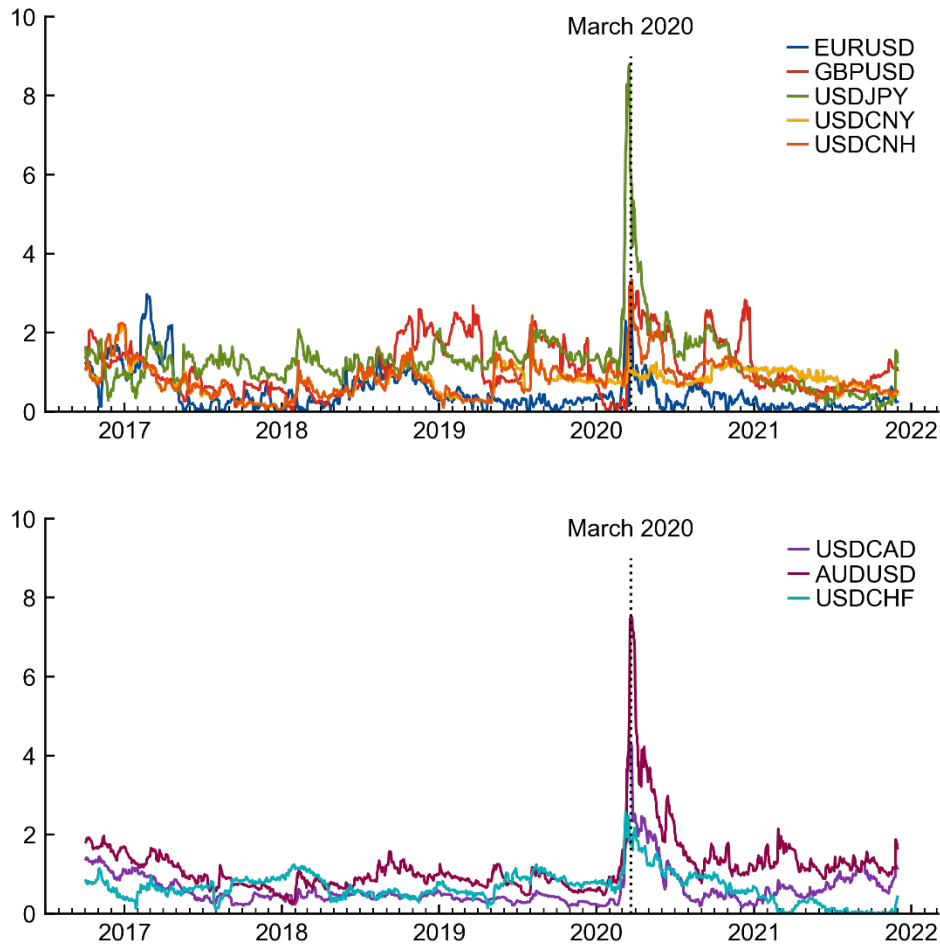


Figure AII.5. SDR Basket Currencies Options Skewness
 25 percent delta 3-month Risk Reversals of SDR Basket Currency Pairs
 (In absolute value of volatility points)



Source: Bloomberg L.P. and IMF staff calculations.

Note: Cross-currency trading quotes in top figure are relative to the USD. Risk reversals are in terms of market conventions for quoting FX currency pairs.

Liquidity pressures in SDR basket currencies eased quickly during the March 2020 COVID-19 crisis, supported by dollar swap lines deployed by the Federal Reserve and several foreign central banks.⁴ Spreads increased significantly in March 2020 but returned to historic average levels quickly, indicating resilience of the underlying currency pairs to the impact of the shock in spot

⁴ On March 19, 2020, the Federal Reserve established temporary dollar liquidity arrangements with other central banks to lessen strains in global U.S. dollar funding markets (see [press release](#)). Swaps were established with the Reserve Bank of Australia, the Banco Central do Brasil, the Danmarks Nationalbank (Denmark), the Bank of Korea, the Banco de Mexico, the Norges Bank (Norway), the Reserve Bank of New Zealand, the Monetary Authority of Singapore, and the Sveriges Riksbank (Sweden). They were widely credited for easing global dollar funding strains associated with the March 2020 market turbulence, see [United States 2020 Article IV Consultation](#), paras. 12-14.

markets (see Annex Figures 2 and 3). Median bid-offer spreads for the Euro, U.K. pound, Japanese yen, and Chinese renminbi (both onshore and offshore) during the COVID-19-related market turmoil episode (February 17, 2020 to May 17, 2020) were generally higher than average spreads observed during the overall sample period.⁵ Additionally, the volatility of the proportional bid-offer spreads was about 7 basis points larger during the crisis episode than the entire sample period for the euro, the onshore Chinese renminbi, the Japanese yen, and the British pound sterling.⁶ The Japanese yen exhibited the largest difference in volatility (about 25 basis points during the COVID-19 crisis compared to 14 basis points for the sample period), indicating that idiosyncratic factors may have contributed to higher volatility of the Japanese yen compared to other SDR basket currencies.⁷

A measure of skewness in the foreign exchange options market quickly returned to pre-crisis levels, indicating resilience in the FX options market for SDR basket currencies. A comparison of the difference between similar delta call and put options with the same expiry (25 percent delta at 3 months)—known as risk reversals—indicates that options markets for SDR basket currencies exhibited resilience during the COVID-19 shock.⁸ After an initial increase in March 2020, risk reversals retraced over half of their COVID-19 related moves within 7 trading days and had fully normalized relative to pre-pandemic trends by May 2020 (see Annex Figure 4). These results suggest that the FX options market was functioning adequately during the COVID-19 crisis for the SDR basket currencies, which enhances the relative attractiveness of SDR basket currencies for reserve managers.

⁵ A notable exception to this increase was the onshore RMB (CNY), which had a lower median and volatility during the COVID crisis, partly driven by crisis-era support.

⁶ The volatility range is measured as 1.5 times the inter-quartile range for upper and lower bounds, represented by the black whiskers on the proportional bid-offer spread graphs.

⁷ A possible explanation of this wider dispersion of bid-offer spreads for the yen could be the relatively larger impact of higher dollar funding costs in Japan compared to other SDR basket currencies. Demand for U.S. dollars from Japanese investors, including insurers and pension funds, outstripped U.S. dollar supply in foreign exchange swap markets during this episode. These factors may have contributed to wider bid-offer spreads observed during the COVID-19 crisis. (see Avdjiev et. al, 2020, "[Dollar funding costs during the Covid-19 crisis through the lens of the FX swap market](#)" (BIS Bulletin No. 1)).

⁸ The data presented are the 25 percent delta 3-month risk reversals, which is the difference in the implied volatility of a 25 percent delta call option less the implied volatility of a 25 percent delta put option at the 3-month expiry. A risk-reversal level of 0 would imply no skew in implied volatility (i.e., neither an upward nor downward expected movement in the underlying FX pair over three months). Positive values indicate calls being more expensive than puts (upside protection on the underlying forex spot is relatively more expensive, so expectation of appreciation of the dollar assuming USD is base currency), while negative values indicate puts are more expensive than calls (downside protection is relatively more expensive, so expectation of a depreciation of the dollar assuming USD is base currency). Significant changes can indicate a change in market expectations for the future direction in the underlying FX spot rate. Risk reversals are often interpreted as the market's best guess about the directional bias of future exchange rate moves.

Annex III. Key Decisions on SDR Valuation and the SDR Interest Rate

This Annex contains key decisions and rules pertaining to freely usable currencies, SDR valuation, SDR interest rate, valuation of currencies in terms of the SDR, procedures for the exchange of currency, and the method of collecting exchange rates used for the valuation of the SDR.

A. Freely Usable Currencies

Rule O-3: Freely Usable Currency

- (a) The Fund shall determine the currencies that are freely usable in accordance with Article XXX(f).
- (b) The Fund shall consult a member before placing its currency on, or removing it from, the list of freely usable currencies.

1998 Board decision on List of Freely Usable Currencies

Pursuant to Article XXX(f), and after consultation with the members concerned, the Fund determines that, effective January 1, 1999 and until further notice, the euro, Japanese yen, pound sterling, and U.S. dollar are freely usable currencies. (EBS/98/219, 12/11/98)

*Decision No. 11857-(98/130),
adopted December 17, 1998*

2015 Board decision determining the Chinese renminbi as a freely usable currency

Pursuant to Article XXX(f), and after consultation with the People's Republic of China, the Fund determines that, effective October 1, 2016, and until further notice, the Chinese renminbi is a freely usable currency.

*Decision No. 15891-(15/109),
adopted November 30, 2015*

B. SDR Valuation

Method of Valuation

1. The value of the special drawing right shall be determined on the basis of the five currencies issued by Fund members, or by monetary unions that include Fund members ("monetary unions"), whose exports of goods, services, and income credits ("Exports") had the largest value during the five-year period ending December 31, 2014, or for any subsequent revision, during the most recent five calendar-year period for which the required Exports data are readily available, and which have been determined by the Fund to be freely usable currencies in accordance with Article XXX(f) of the

Articles of Agreement. In the case of a monetary union, the determination of the value of Exports shall exclude trade among members that are part of the union. In the case of a member with more than one currency, the determination of the value of Exports shall be based, for each currency, on trade by the member's economic region for which the currency is legal tender.

2. The percentage weight of each currency selected in accordance with paragraph 1 above for the SDR basket composition shall be equal to the sum of:

- (a) One half of the share of the member or monetary union issuing that currency in the total Exports of the members or monetary unions issuing the currencies as calculated in accordance with paragraph 1 above; and
- (b) One sixth of the share of that currency in the total value of balances of the currencies selected in accordance with paragraph 1 above, held by monetary authorities that are not issuers of the relevant currency, and in the case of the currency of a monetary union, by the monetary authorities of members other than those forming part of the monetary union, at the end of each year of the five-year period ending December 31, 2014, and thereafter at the end of each year of the relevant five-year period referred to in paragraph 1 above;
- (c) One sixth of the share of that currency in the total value of foreign exchange market turnover of the currencies selected in accordance with paragraph 1 above, during the five-year period ending December 31, 2014, and thereafter during each relevant five-year period referred to in paragraph 1 above; and
- (d) One sixth of the share of that currency in the total value of international banking liabilities and international debt securities denominated in the currencies selected in accordance with paragraph 1 above, at the end of each year of the five-year period ending December 31, 2014, and thereafter at the end of each year of the relevant five-year period referred to in paragraph 1 above. In the case of a monetary union, international banking liabilities and international debt securities shall be determined on the basis of the monetary union as one economic region. In the case of a member with more than one currency, these indicators shall be determined on the basis of the economic region of the member for which the currency in question is legal tender.

3. In accordance with the principles set forth in paragraphs 1 and 2 above, effective October 1, 2016, the value of one special drawing right shall be the sum of the values of specified amounts of the five currencies listed below. These amounts shall be determined on September 30, 2016 in a manner that will ensure that, at the average exchange rates for the three-month period ending on that date, the shares of each of the five currencies in the value of the special drawing right correspond to the weights specified below.

Currency	Weight (in percent)
U.S. dollar	41.73
Euro	30.93
Chinese renminbi	10.92
Japanese yen	8.33
Pound sterling	8.09

4. The list of the currencies that determine the value of the special drawing right, and the amounts of these currencies, shall be revised with effect on October 1, 2021 and thereafter on the first day of each subsequent period of five years in accordance with the following principles, unless the Fund decides otherwise in connection with a revision:

(a) The currencies determining the value of the special drawing right shall be determined in accordance with paragraph 1 above, provided that a currency shall not replace another currency included in the list at the time of the determination unless the value of the exports of goods and services of the member or of members of a monetary union, whose currency is not included in the list, during the relevant period exceeds that of the member or the monetary union issuing the currency included in the list by at least 1 percent.

(b) The amount of the five currencies referred to in (a) above shall be determined on the last working day preceding the effective date of the relevant revision in a manner that will ensure that, at the average exchange rates for the three-month period ending on that date, the shares of these currencies in the value of the special drawing right correspond to percentage weights for these currencies, which shall be established for each currency in accordance with (c) below.

(c) The percentage weights shall be established in accordance with paragraph 2 above. The percentage weights shall be rounded to the nearest 1 percent or as may be convenient. Adjustments to currency weights resulting from the above formula shall be made, if necessary to ensure that the rounded currency weights sum to one hundred percent, in a manner that has the least impact on relative weights.

5. The amounts of the currencies under paragraphs 3 and 4 above shall be determined in a manner that will ensure that the value of the special drawing right in terms of currencies on the last working day preceding the five-year period for which the determination is made will be the same under the valuation in effect before and after revision ("same value"), and shall be calculated in accordance with the following guidelines:

a) The currency amounts calculated for the new basket will be rounded to five significant digits based on the sixth significant digit. If necessary to achieve the same value, an adjustment will be made to the amount of the currency against which the values of the other SDR basket currencies are determined in accordance with Rule O-2.

b) If the calculations under (a) do not yield the same value in five significant digits, the calculations shall be made by applying the same guidelines but rounding currency amounts to six significant digits based on the seventh significant digit.

*Decision No. 15891-(15/109), adopted November 30, 2015,
as amended by Decision No. 16033-(16 /17), adopted July 20,
2016 and Decision No. 16979-(21/25), adopted March 5, 2021.*

Extension of the Valuation of the SDR

Notwithstanding Paragraphs 2 and 4 of Executive Board Decision No. 15891-(15/109), adopted November 30, 2015, the SDR valuation basket determined under Executive Board Decisions No. 15891-(15/109), adopted November 30, 2015 (as amended), and No. 16061-(16/91), adopted September 30, 2016, shall remain in effect through July 31, 2022.

Decision No. 16979-(21/25), adopted

March 5, 2021

Rule O-1: Valuation of the SDR

The value of the SDR shall be the sum of the values of the following amounts of the following currencies:

U.S. dollar	0.58252
Euro	0.38671
Chinese renminbi	1.0174
Japanese yen	11.900
Pound sterling	0.085946

Decision No. 16061-(16/91), adopted

September 30, 2016

C. SDR Interest Rate

Rule T-1(c): SDR Interest Rate

Effective October 1, 2016, Rule T-1(c) of the Fund's Rules and Regulations shall be amended by inserting "Chinese renminbi: Three-month benchmark yield for China Treasury bonds as published daily by the China Central Depository and Clearing Co., Ltd." after "Euro: Three-month spot rate for euro area central government bonds with a rating of AA and above published by the ECB".

(SM/15/278, Sup. 2, 11/25/15)

Decision No. 15891-(15/109), adopted November 30, 2015

as amended by Decision No. 16033-(16/17), July 20, 2016

The combined market interest rate shall be the sum, rounded to the three nearest decimal places of the products that result from multiplying each yield or rate listed below, expressed as an equivalent annual bond yield, for the preceding Friday by the value in terms of the SDR on that Friday of the amount of the corresponding currency specified in Rule O-1, as determined pursuant to Rule O-2(b). If a yield or rate is not available for a particular Friday, the calculation shall be made on the basis of the latest available yield or rate.

U.S. dollar	Market yield for three-month U.S. Treasury bills
Euro	Three-month spot rate for euro area central government bonds with a rating of AA and above published by the European Central Bank
Chinese renminbi	Three-month benchmark yield for China Treasury bonds as published daily by the China Central Depository and Clearing Co., Ltd.
Japanese yen	Three-Month Japanese Treasury Discount Bills
Pound sterling	Market yield for three-month U.K. Treasury bills

II. Valuation of Currencies in Terms of the SDR

Rule O-2: Valuation of Currencies in Terms of the SDR

- (a) The value of the United States dollar in terms of the SDR shall be equal to the reciprocal of the sum of the equivalents in United States dollars of the amounts of the currencies specified in Rule O-1, calculated on the basis of exchange rates established in accordance with procedures decided from time to time by the Fund.
- (b) The value of a currency other than the United States dollar in terms of the SDR shall be determined on the basis of the value of the United States dollar in terms of the SDR in accordance with (a) above and an exchange rate for that other currency determined as follows:
 - (i) for the currency of a member having an exchange market in which the Fund finds that a representative spot rate for the United States dollar can be readily ascertained, that representative rate;
 - (ii) for the currency of a member having an exchange market in which the Fund finds that a representative spot rate for the United States dollar cannot be readily ascertained but in which a representative spot rate can be readily ascertained for a currency as described in (i), the rate calculated by reference to the representative spot rate for that currency and the rate ascertained pursuant to (i) above for the United States dollar in terms of that currency;
 - (iii) for the currency of any other member, a rate determined by the Fund.
- (c) Procedures to establish exchange rates under (b) above shall be determined by the Fund in consultation with members.

III. Procedures for Exchange of Currency

Rule O-4: Procedures for Exchange of Currency

- (a) The Fund shall consult all members with respect to procedures for the prompt exchange of currency, or to facilitate such exchange, in connection with
 - (i) the operations and transactions of the Fund conducted through the General Resources Account, and
 - (ii) transactions with designation conducted through the Special Drawing Rights Department.
- (b) On the request of any member, an Executive Director, or the Managing Director, the Executive Board shall decide whether procedures under (a) above for the exchange of currency are in accordance with the obligations of members.
- (c) The Fund shall inform all members of the procedures for the exchange of each freely usable currency.

IV. Method of Collecting Exchange Rates for the Calculation of the Value of the SDR for the Purposes of Rule O-2(a)

1. For the purpose of determining the value of the United States dollar in terms of the special drawing right pursuant to Rule O-2(a), the equivalents in United States dollars of the amounts of currencies specified in Rule O-1 shall be based on spot exchange rates against the United States dollar. For each currency the exchange rate shall be the middle rate between the buying and selling rates at noon in the London exchange market as determined by the Bank of England.
2. If the exchange rate for any currency cannot be obtained from the London exchange market, the rate shall be the mid-market rate, as provided to the Fund by the Federal Reserve Bank of New York, based on spot exchange rates observed at around noon London time or, if not available, the mid-market rate based on spot exchange rates observed at around noon New York time..
3. If the exchange rate for any currency cannot be obtained as described in paragraph 1 or 2 above, the rate shall be the mid-market rate, as provided to the Fund by the European Central Bank based on spot exchange rates observed at around noon London time or, if not available, the market exchange rates observed at 2:15 p.m. Central European Time.
4. If the rate for any currency against the United States dollar cannot be obtained directly in any of these markets, the rate shall be calculated indirectly by use of a cross rate against another currency specified in Rule O-1.
5. If on any day the exchange rate for a currency cannot be obtained in accordance with paragraph 1, 2, 3, or 4 above, the rate for that day shall be the latest rate determined in accordance with

paragraph 1, 2, 3, or 4 above, provided that after the second business day the Fund shall determine the rate. (EBS/16/100, 10/19/16).

*Decision No. 6709-(80/189) S, December 19, 1980, as amended
by Decision No. 12157-(00/24) S, March 9, 2000 and 16069-(16/95),
October 26, 2016.*

Annex IV. Survey Questionnaire Sent to Participants in the SDR Market

The preparation of the 2022 SDR valuation review is underway.¹ This questionnaire seeks feedback from SDR users on selected operational issues to help inform the review. The responses from the survey will be aggregated and remain **strictly confidential** at the member level. The feedback requested pertains to operational issues related to the hedging of SDR positions and to the experience with SDR-related transactions in onshore and offshore RMB markets since the last Review in 2015.

1. Hedging of SDR positions

	Not at all	To some extent	To a large extent
a. To what extent are you undertaking hedging operations for your SDR position?			
b. To what extent does the non-alignment between the maturity of SDR of instruments (currently 3 months) and the interest rate reset period (currently 1 week) hamper your hedging activities, if at all?			

As background, the IMF currently publishes daily SDR exchange rates derived from different sources at different times. The exchange rates used for the [daily valuation](#) of the U.S. dollar in terms of the SDR are provided by the Bank of England, based on exchange rates observed at around noon London time, while [representative exchange rates](#) used in valuing other members' currencies in terms of the SDR are provided by members' central banks and captured at various times throughout the trading day.

	Not at all	To some extent	To a large extent
c. To what extent do differences in the sources and timing of data collection of exchange rates hamper your hedging of SDR positions or other SDR-related operations?			

¹ The SDR basket is reviewed every five years, or earlier if warranted, to ensure that the basket reflects the relative importance of currencies in the world's trading and financial systems. The reviews cover the key elements of the SDR method of valuation, including criteria and indicators used in selecting SDR basket currencies and the initial currency weights used in determining the amounts (number of units) of each currency in the SDR basket. The IMF Executive Board meeting on the 2022 Review is scheduled for May 2022, and the new basket will enter into effect on August 1, 2022.

	Daily valuation rates	Representative rates	Other (please specify)
d. For your balance sheet valuation purposes, which SDR exchange rates do you use?			

	N/A	Not at all	To some extent	To a large extent
e. To what extent have operational challenges such as transaction costs and administrative burdens hampered your reserve management or hedging activities in the following currency markets?				
U.S. dollar				
Euro				
Chinese renminbi				
Japanese yen				
British pound sterling				

f. Please describe the nature of the operational challenges you may have faced, if any, for each relevant currency market.

g. Please add any suggestions you may have for relevant currency markets that, in your view, would help improve your ability to hedge SDR positions.

2. SDR-Related transactions in the onshore and offshore RMB markets

	None	Some activity	Important activity
h. How would you rank your level of activity in the onshore RMB market?			
i. How would you rank your level of activity in offshore RMB markets?			

	Same level since 2015	Decline since 2015	Increase since 2015
j. How has the level of your onshore RMB activities evolved since 2015?			
k. How has the level of your offshore RMB activities evolved since 2015?			

l. Please describe your experience of operating in the RMB onshore and offshore markets with regard to the ease and cost of operation.

3. Recommendations

m. Considering your answers to sections 1 and 2 above, what would be your three most important recommendations, if any, to improve the usability of SDR. Please also feel free to add any matter related to the SDR usability that you wish to mention.