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To: Members of the Committee of the Whole on Review of Quotas

From: The Secretary

Subject: **Sixteenth General Review of Quotas—Initial Considerations on Quota Formula and Realignment Shares, and Quota Data Update—Statistical Appendix**

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Publication: Not proposed at this time, owing to the preliminary nature of the discussions. Consistent with past practice, the papers discussed by the Committee of the Whole will only be made public after the conclusion of the Sixteenth General Review of Quotas. Updated quota data will be published separately on the Fund's website.

Questions: Mr. Hatanpaa, FIN (ext. 35484)  
Ms. Kida, FIN (ext. 35585)  
Mr. Harutyunyan, STA (ext. 39386)  
Mr. McHugh, STA (ext. 35820)





July 30, 2021

## SIXTEENTH GENERAL REVIEW OF QUOTAS—INITIAL CONSIDERATIONS ON QUOTA FORMULA AND REALIGNING SHARES, AND QUOTA DATA UPDATE— STATISTICAL APPENDIX

Approved By  
**Bernard Lauwers (FIN)**  
and **Louis Marc  
Ducharme (STA)**

Prepared by the Finance and Statistics Departments. The FIN team comprised Greetje Everaert and Mizuho Kida (leads), Marco Cobanera, Constance de Soyres, Beata Jajko, Tetsuya Konuki, Flavien Moreau, Sandra Saveikyte, Zhibo Tan, and Mengxue Wang, under the guidance of Heikki Hatanpaa. The STA team comprised Artak Harutyunyan and Jimmy McHugh (leads), Jolayemi Akinde, Borys Cotto, Marcelo Dinenzon, Brian Graf, Venkateswarlu Josyula, Bright Kimuli, Emmanuel Manolikakis, Laurent Meister, Lisbeth Rivas, and Ercument Tulun, under the guidance of Gabriel Quirós-Romero. Rafael Flores and Shanika Jayakody provided helpful assistance.

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## INTRODUCTION

**1. This appendix discusses the required data, data sources, as well as data availability and adjustments used for the quota database.** The quota database is updated annually, and the current update covers data through 2019, based on the latest information as of end-January 2021.

## REQUIRED DATA

**2. The quota database covers the following data for all 190 member countries** (converted into SDRs):

- GDP at market prices (“MER GDP”) for three years (2017–19).
- GDP at purchasing power parity (“PPP GDP”) for three years (2017–19). PPP GDP is calculated by deflating GDP at market prices by the PPP price level index, allowing comparisons across countries for a given period.<sup>1</sup>
- Current receipts (goods, services, primary income, secondary income, and capital account) for 13 years (2007–19).<sup>2</sup> These comprise the credit component of all economic transactions between resident and nonresident entities other than those relating to financial account transactions. As only autonomous transactions are considered for quota calculations, transactions related to exceptional financing are excluded from this measure (i.e., data are based on the analytic presentation of the balance of payments).
- Current payments (goods, services, primary income, secondary income, and capital account) for five years (2015–19). These comprise the debit component of all economic transactions between resident and nonresident entities other than those relating to financial account transactions.<sup>3</sup>
- *Net capital flows or financial account balance* for 13 years (2007–19).<sup>4</sup> Net capital flows relate to cross-border transactions of the financial account in all external financial assets and liabilities. As only autonomous transactions are considered for quota calculations, this concept excludes reserve assets, credit and loans from the Fund, and exceptional financing (i.e., the financial account balance is based on the analytic presentation of the balance of payments).

<sup>1</sup> More specifically, the PPP GDP data are calculated by dividing a country's nominal GDP in its own currency by its corresponding PPP factor. The *2017 International Comparison Program (ICP)* PPP factors were extended to 2019 using *WEO* methodology (see paragraph 10 below).

<sup>2</sup> The balance of payments data are based on the *Balance of Payments and International Investment Position Manual*, sixth edition (*BPM6*). To ensure comparability with previous quota calculations, both current and capital transfers—excluding exceptional financing—are included in current receipts, where such data are available.

<sup>3</sup> Exceptional financing transactions are only on the credit side of the current and capital accounts (see *BPM6*, Appendix 1).

<sup>4</sup> The term “net capital flows” comes from previous quota database terminology, and covers transactions included in the financial account under the *BPM6*.

- *Official reserves*, defined as the sum of the average over the 12 months of 2019 of foreign exchange, SDR holdings, reserve position in the Fund, and monetary gold valued at SDR 35 per fine troy ounce.

**3. Quota variables are initially calculated in SDRs and then converted into shares of the respective global total for use in the current quota formula.** The quota database includes four variables:

- **GDP:** The three-year average of GDP (2017–19), at market and PPP exchange rates. MER and PPP GDP are blended through a weighted average of MER GDP shares (60 percent) and PPP GDP shares (40 percent).
- **Openness:** The five-year average of the sum of current receipts and current payments (2015–19).
- **Variability:** The sum of current receipts and net capital flows (or following *BPM6*, current receipts minus the financial account balance), measured as the standard deviation from a centered three-year trend over a 13-year period (2007–19).
- **Reserves:** The 12-month average (January to December 2019) of official reserves, as defined above.

**4. The data sources and methodology in this update are consistent with those used in recent quota data updates.** The primary data source is the Fund’s *International Financial Statistics (IFS)*. Missing data were supplemented in the first instance by the *World Economic Outlook (WEO)* database. Remaining missing data were computed based on country desk data. As is customary, a cutoff date of January 31, 2021 for incorporating new data in the quota database was employed for the *IFS* and, where relevant, the country desk data; consistent with this cutoff, the Fall 2020 publication was used for *WEO* data.

**5. The main results of the update are presented in shares for country groups based on the current quota classifications.** The country group classifications have been maintained dating back to the 11<sup>th</sup> Review.<sup>5</sup> In these classifications, nine members currently considered as advanced economies (AEs) in the *WEO* are regarded as emerging market and developing countries (EMDCs) in the quota classification.<sup>6</sup> Additionally, the regional groups for EMDCs have been maintained over time and thus differ for some EMDCs from those in the *WEO*.

<sup>5</sup> For background, see Supplement 1, Annex IV.

<sup>6</sup> Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia.

## CONSTRUCTION OF THE DATABASE

### A. Main Sources

- 6. To ensure similar treatment for all countries and facilitate comparability and transparency, the data in the quota database should have several attributes.** To the extent possible, they should be comprehensive (i.e., contain all required data for all members); compiled in line with internationally accepted concepts and definitions; reported by official sources (central banks and national statistical agencies); and comparable (consistent and coherent) across time and countries.
- 7. As in past quota updates, the main source of data used for the quota database was the *IFS*.** The *IFS* data are reported to STA by central banks and national statistical agencies, and are mostly based on internationally consistent definitions, such as those in the *BPM6*<sup>7</sup> and the *1993/2008 System of National Accounts (1993/2008 SNA)*. STA manages this database for international statistical cooperation and publication purposes, and to support the Fund's surveillance and use of Fund resources functions.
- 8. Missing observations in the *IFS* data are largely supplemented using the *WEO* database.**<sup>8</sup> The combination of the two sources is based on pre-defined procedures designed for each variable, as described in the next section. For some member countries, there may be discrepancies between the *IFS* and the *WEO* datasets due to varying institutional, legal, and accounting contexts of data compilation (Boxes 1 and 2). For members where neither *IFS* nor *WEO* data were available, FIN obtains data from staff reports and IMF country desks or fills gaps with the data of adjacent years, as detailed in section D.
- 9. Finally, after the gaps are filled, the full dataset is reviewed by country desks for reasonability.** In cases where discrepancies are significant and desk data are more reliable, adjustments to the final data are made. The adjustments made in this update round are described in section C.

### B. Initial Database – *IFS* Supplemented by *WEO*

#### GDP Data

- 10. The *IFS* and *WEO* databases provided GDP data for 188 members (all Fund members except Andorra and Syria).** The PPP-based GDP data derived using the *WEO* methodology cover 188 members (all Fund members except Andorra and Syria). Under the *WEO* methodology,

<sup>7</sup> Starting with the August 2012 *IFS*, STA publishes balance of payments data using the *BPM6* presentation. Therefore, starting with the 2013 quota data round, in consultation between STA and countries, data were converted to a *BPM6* presentation using generic conversion rules developed by STA, for around 15 percent of the countries that continue to report on a *BPM5* basis.

<sup>8</sup> *IFS* and *WEO* data are handled and aggregated by STA using a data processing system known as the Economic Outlook Suite (EcOS).

PPP-based GDP is calculated by dividing a country's nominal GDP in domestic currency by its PPP (conversion) factor relative to the United States<sup>9</sup> and then converting it into SDR units, using the SDR-USD exchange rate. The PPP factors are based on the data from the International Comparison Program (ICP) for 2017 that were released in May 2020.<sup>10</sup> These data were then extended forward (to 2019) by using the growth in relative GDP deflators (the deflator growth of a country divided by the deflator growth of the United States).<sup>11</sup>

## Balance of Payments Data

**11. The balance of payments (BOP) data stored in the *IFS* database were used as reported by members to STA.** Of the 190 members, the number of *IFS* reported data used for at least some of the years are as follows: 180 for the period 2007–19; and 177 for the period 2015–19. When data were not available for some members for the timeframe required for the quota calculations, estimates were made, largely on the basis of the *WEO*, as described above.<sup>12</sup>

**12. The number of economies reporting their BOP data to the *IFS* database under *BPM6* has now increased to 177, out of which 161 are Fund members.** The remainder still provide data based on *BPM5*, which are then converted by STA into *BPM6* format (see Box 1). The *BPM5-BPM6* conversion matrix was developed by the *WEO* team in collaboration with STA to assist IMF country desks. Compared to the previous template based on the *BPM5*, the new *BPM6* template used by the *WEO* to receive data from the country desks beginning with the October 2014 *WEO* publication introduced a number of changes, some of which impacted on the gap-filling procedures as follows: (i) more details became available for some series (e.g., gross flows were included on an optional basis for primary income, secondary income, and capital account, as well as for the International Investment Position (IIP) (total assets and liabilities)); and (ii) some indicators used in the calculation of the net capital flows were removed (net credit and loans from the IMF) or became optional (the exceptional financing series).

**13. To the extent possible, STA collected additional information from IMF country desks on the gross flows series underlying the variables included in the quota formula that were not reported to *WEO* (optional reporting) or no longer required by the new template.** *WEO* does not collect separate data for goods for processing or for reverse investment. Unless the authorities reported *BPM6* data to desks, no imputations were made by STA for these variables. This is

<sup>9</sup> The choice of the numéraire country is arbitrary and does not affect the calculations, since PPP price indexes are adjusted to be transitive across countries.

<sup>10</sup> See [Purchasing Power Parities and the Size of World Economies: Results from the 2017 International Comparison Program](#).

<sup>11</sup> The data for nominal GDP in local currency and the GDP deflators were obtained from the October 2020 *WEO*, consistent with the January 31, 2021 data cutoff date for the quota data. PPP factors based on the results of the ICP 2017 round were used for the year 2017, and the standard *WEO* methodology was used to extend factors to 2019.

<sup>12</sup> The methods used to fill gaps were, in principle, largely similar to those used for the purpose of publishing World and Regional Tables in the [Balance of Payments Statistics Yearbook \(BOPSY\) and were described in External Review of Quota Formulas—Quantification](#) (4/12/2001).

consistent with the generic conversion of reported *IFS* data where, if a country did not report data for goods for processing or reverse investment, no imputations were made.

**14. The data source breakdown for the period 2007–19 is as follows.** Among the 180 members reporting data for *IFS*, 142 members' data are derived entirely from *IFS* reported data, 35 members' data are derived from a combination of *IFS* and *WEO* estimates, two members' data are derived from *IFS* and *WEO* but have missing data for some years, and one member's data are derived from *IFS* reported data and have missing data for some years (no *WEO* data available). Among the ten members not reporting any data to *IFS*, seven members' data are derived entirely from *WEO* estimates, for one member (Somalia), data are derived partially from *WEO*, and for two members (Andorra and San Marino), data are not available either in *IFS* or in *WEO*.

**15. The data source breakdown for the period 2015–19 is as follows.** Among the 177 members reporting data for *IFS*, 148 members' data are derived entirely from *IFS* reported data, and 29 members' data are obtained from a combination of *IFS* and *WEO* estimates. Among the 13 members not reporting any data for *IFS*, 10 members' data are derived entirely from *WEO* estimates, and three members (Andorra, San Marino, and Syria) have neither *IFS* nor *WEO* data available.

**16. The following subsections describe for each of the data categories the general procedures employed by STA to construct the required database for the quota calculations.**

#### ***Goods and Services Transactions***

**17. Data reported by members and maintained in *IFS* were used for each country.** Where there were data gaps prior to or after the latest year of reporting to STA, estimates were made by applying the growth rates derived from the *WEO* to the closest reported data (credits and debits). For countries where no data were reported to STA, available *WEO* data were used. For China, P.R., Hong Kong SAR, and Macao SAR, goods data were adjusted for trade among the mainland, Hong Kong SAR, and Macao SAR based on the Direction of Trade Statistics (DOTS) database (details in Box 3).<sup>13</sup>

#### ***Primary Income, Secondary Income, and the Capital Account***

**18. Data on primary income and secondary income reported by members and maintained in *IFS* were used for each country.** Where there were data gaps, estimates were derived using *WEO* data series. The adjustment procedure consisted of the following: (1) if available, *WEO* gross flows are used; (2) if not, and the gap was in the leading year(s) of the series, then *WEO* net value was inserted for the leading year(s) where data were missing, either as credits if *WEO* showed a net

<sup>13</sup> BOP trade in goods data are reported in *IFS* on a *BPM6* basis and do not include goods for processing (GFP), while the Direction of Trade Statistics (DOTS) includes all trade in goods. While staff was able to adjust for this factor in previous databases, this is no longer possible with the move to *BPM6* reporting. As such, using DOTS to adjust the *BPM6* data for intra-trade may lead to an over-estimation of the intra-trade flows. Based on data available for the quota database updated through 2011, any such over-adjustment is likely to be small.

credit balance or as debits if a net debit balance was shown in *WEO*; (3) if the gap was after a reported observation, then the *WEO* net value was used for each year; also, the latest reported debits and credits were carried forward; however, to assure that gross debits and credits are consistent with the net values shown, a positive adjustment is made to the carry forward credit when the net *WEO* value shows a higher net credit, or to the carry forward debit when the net *WEO* value shows a higher net debit.

**19. The primary source for data on the capital account as per *BPM6* is the *IFS* data provided by member countries.** When no data are reported for *IFS*, the *WEO* gross flows were used, if available. If not, the *WEO* net capital account value, depending on its sign, was used to derive an estimate. In a few cases, countries reported to *IFS* only “net” capital account data. When a country reports to *IFS* only a net value for the capital account, that full value is allocated to credits (if positive) or debits (if negative). Countries reporting under *BPM6* have eliminated migrants’ transfer from their capital accounts (according to *BPM6*, a change of ownership is no longer imputed).

### ***Net Capital Flows***

**20. The primary source for data on net capital flows is the *IFS* financial account data provided by member countries to STA.** When no data are reported for *IFS*, *WEO* values are used to fill in the gaps, to the extent possible. While the *IFS* provides the financial account balance in the analytic presentation (i.e., net (standard) financial flows excluding the group consisting of (i) reserve assets, (ii) exceptional financing,<sup>14</sup> and (iii) the net credit and loans from the IMF), the new *WEO* template no longer covers some of these components. Data on net credit and loans from the IMF for all countries were sourced from the *IFS* database, while the exceptional financing data for the missing data points were obtained from *WEO* and some from the desks, to the extent possible.

### ***Official Reserves***

**21. Data on official reserves—comprising monetary gold, SDR holdings, reserve position in the Fund, and foreign exchange holdings—were obtained from *IFS*.**<sup>15</sup> Monetary gold was valued at SDR 35 per fine troy ounce. In deriving annual average holdings of official reserves for 2019, for each reserve component, the end-of-period data for each of the 12 months of 2019 were summed and then divided by 12. SDR holdings and reserve position in the Fund are based on Fund accounts and data are available for the entire period. However, data for foreign exchange are not always reported for the entire 12-month period. If this is the case, the number of months for which data were reported was used to calculate the average. If a country did not report its foreign

<sup>14</sup> This includes various “below the line” transactions undertaken to finance BOP needs, including measures such as accumulation or repayment of arrears and debt forgiveness or rescheduling. In principle, transactions in reserve-related liabilities should also be excluded from “net capital flows,” but they are not due to data limitations.

<sup>15</sup> Consistent with the treatment of reserves for the 2001 ad hoc quota increase for China, P.R., the reserves of Hong Kong SAR and Macao SAR are not included for quota calculations.

exchange and/or monetary gold holdings data to STA for publication in the *IFS*, staff reports are used to gap fill this information (see also missing data series, below).<sup>16</sup>

### Conversion to SDRs

**22. The BOP and the GDP data series in U.S. dollars were converted to SDRs using period-average exchange rates.** The reserves data are either originally available in SDRs or converted to SDRs using monthly end-of-period exchange rates for every data point in the 12-month period.

## C. Missing Data Series and Data Adjustments

### Missing Data in *IFS* and *WEO*

**23. Andorra had missing data values for PPP GDP, current payments, current receipts, net capital flows, and official reserves.** On PPP GDP, in the absence of an ICP estimate of the PPP conversion factor for Andorra, PPP GDP was estimated using the ICP's PPP conversion factor for Spain in the initial year (2017) and then extended forward to 2018–19 using the *WEO* methodology.<sup>17</sup> Openness was calculated based on the data on exports and imports of goods and services for 2015–19 provided by the desk. Variability was calculated based on the data on exports of goods and services for 2007–19 provided by the desk and an estimate of financial account balance using net flows in other investments from mirror data available from the Bank for International Settlements' Locational Banking Statistics as a replacement for current receipts and net capital flows.<sup>18</sup> Regarding official reserves, the missing value was not replaced by an estimate, since Andorra had no external assets that met the conditions for reserve assets in 2019,<sup>19</sup> and prior to its membership in the Fund since 2020, did not hold Special Drawing Rights (SDRs) or the reserve tranche position at the IMF.

**24. San Marino had missing data values for current payments, current receipts, and net capital flows (all years).** Both openness and variability were calculated based on the BOP data for 2017–19 provided by the desk.

**25. Somalia had missing data values for net capital flows (all years).** The gaps were filled with desk data for 2013–19.

<sup>16</sup> Also, in agreement with BCEAO authorities, monthly average of reported official foreign exchange reserves of WAEMU for 2019 are allocated to member countries using their shares in the total foreign exchange reserves of the Union as per the 2017 quota data update. These figures replaced the foreign exchange data reported by eight WAEMU member countries for 2019.

<sup>17</sup> A similar methodology was used to estimate PPP GDP series for Andorra for its membership process, as neither the 2011 ICP nor 2017 ICP provide an estimate of the PPP conversion factor for Andorra. See EB/CM/Principality of Andorra/20/1.

<sup>18</sup> A similar methodology was used to estimate variability for Andorra for its membership process.

<sup>19</sup> See Andorra 2021 Article IV Staff Report.

**26. Syria stopped reporting data as of 2010.** For GDP and openness, the last observation in SDRs (2010) was used as a replacement. Variability was calculated based on the 2007–10 period.

**27. For some countries, the *IFS* reserves data for 2019 had no information on the foreign exchange or gold components, or other shortcomings.** In those cases, whenever possible, more accurate reserves data were obtained from desk data. Desk data were used for Cameroon, Chad, Equatorial Guinea, Democratic Republic of Congo, Gambia, Haiti, Iran,<sup>20</sup> Jordan, Kiribati,<sup>21</sup> Marshall Islands, Nauru, Palau, Somalia, Sudan, Turkmenistan, Tuvalu, Uganda, Venezuela, and Yemen. In addition, the foreign exchange component of the reserves data for Lebanon was replaced with desk data to ensure evenhandedness and allow reserves data to be more closely aligned with the definitions based on the *BPM6*.<sup>22</sup> The data on reserves for Syria comprise only *IFS* data on SDR holdings and reserve position in the Fund in 2019.

### ***Data Adjustments***

**28.** Current receipts for China, current payments and current receipts for Barbados, Gabon, Finland, and Micronesia, and net capital flows for Barbados, Finland, Micronesia, and Somalia were replaced with desk data to address issues in reported data or to reflect data updates within the cutoff but not yet reported to the *IFS*.

**29.** GDP data (market and PPP) for Haiti, Lesotho, and Togo were replaced with desk data, to reflect GDP revisions that had taken place within the cutoff date but were not yet reported to the *IFS*.

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<sup>20</sup> For Iran, no official reserves data are reported to *IFS*. In line with *WEO* data, desk-reported data exclude foreign exchange reserves unusable due to financial sanctions.

<sup>21</sup> Kiribati's official reserves include the balance of its sovereign wealth fund and reflect an upward correction from last year's quota data update, which included only the SDR holdings and reserve position with the Fund. A new rules-based withdrawal policy for sovereign wealth fund was recently (post data cutoff date) adopted by the authorities (see Kiribati 2021 Article IV Staff Report, Box 1). Staff will carefully analyze whether this policy could affect the appropriateness of including the sovereign wealth fund as part of reserves in future quota data updates.

<sup>22</sup> The following components were excluded from Lebanon's official foreign exchange data as they do not meet the reserve assets criteria: Central Bank's holdings of its own government Eurobonds, foreign securities the nature of which are unknown, loans to resident banks in foreign currency, and other accounts deposits.

### Box 1. Methodological Issues

International standards for GDP compilation are laid out in the *System of National Accounts (SNA)*. About 52 percent of IMF members compile GDP data according to the current vintage, the *2008 SNA*, 47 percent are based on the *1993 SNA* and only 1 percent still apply the *1968 SNA*. The *1993 SNA* extended the scope of GDP slightly, making refinement to the calculation of production of goods for own final use and adding mineral exploration, computer software, and artistic originals to capital formation. Further changes introduced by the *2008 SNA* have impacted on GDP and other macro-economic aggregates for member countries. Some of the noteworthy changes brought out by the *2008 SNA* are: including research and development expenditures in gross capital formation rather than in intermediate consumption, and including depreciation of research and development assets in consumption of fixed capital; including net acquisitions of weapon systems in gross capital formation rather than in government final consumption, and including depreciation of military assets in consumption of fixed capital; making refinements to the calculation of Financial Intermediation Services Indirectly Measured for loans and deposits using a reference rate and requiring implementation of the reference rate method rather than treating it as an option; and calculation of non-life insurance output using the adjusted claims and the adjusted premium supplements. This has resulted in an increase in reported GDP levels, but the size of data inconsistencies across countries due to the revisions related to different SNA vintages is likely to be smaller than other differences related to known measurement problems with GDP (e.g., under-coverage of surveys, outdated base years, or differing adjustment methods for the size of the non-observed economic activity).

With regard to BOP series for quota calculations, the current and capital account receipts and payments cover goods, services, primary income, secondary income, and the capital account. Starting with the July 2015 *IFS* issue, the *IFS* (and the on-line Balance of Payments Statistics database) excluded the migrants' transfers from the capital account, in line with *BPM6* guidance. These had originally been retained since the 2012 launch of the *BPM6*-basis generic-converted series to ensure consistency with the balance of capital account and net errors and omissions series in the *BPM5*-based series.

With regard to financial account transactions, the accuracy of financial account data in many countries, including those in the *IFS* database, is uneven and the data are generally less comprehensive than the other data used for the quota calculations. This reflects classification and practical difficulties encountered by countries in compiling the data. Financial account data, particularly on the private nonbank sector, are generally difficult and resource intensive to compile. The switch from data collection systems based predominantly on government and balance sheet records to systems (particularly surveys) incorporating large private nonbank sector transactions has been slow. Many countries are still in the midst of adapting their collection and recording systems to take account of changes in the composition and magnitude of financial transactions, including new instruments such as financial derivatives. Institutional and accounting requirements for data compilation may differ across countries and data availability on the private nonbank sector varies. In the *IFS*, in some instances, only aggregates and not component series are reported.

With regard to official reserves, the majority of IMF members follow accepted international practices in reporting their data for dissemination in the Fund's main statistical publications, the *IFS* and the monthly online Balance of Payments Statistics database. *BPM6* contains a number of clarifications for the reporting of reserve assets. Box 2, Changes with *BPM6*, includes clarifications on the currency composition of the official reserves. In addition, SDDS subscribers and SDDS Plus adherents disseminate data in the Data Template on International Reserves and Foreign Currency Liquidity. The updated [International Reserves and Foreign Currency Liquidity: Guidelines for a Data Template](#) are consistent with *BPM6*.

### Box 2. Changes with BPM6

The *Balance of Payments and International Investment Position Manual*, sixth edition (*BPM6*) introduced a number of changes to data underlying the variables included in the quota formula. The *IFS* (and the online Balance of Payments Statistics database) began publishing data using the *BPM6* presentation exclusively starting in August 2012. Full implementation of *BPM6* by IMF member countries will continue over the next years (177 economies reported their own *BPM6* data as of end-January 2021, out of which 161 are Fund members), and as a result, there will be a mixture of *BPM5* and *BPM6* reporting that will marginally affect future quota database updates. The main changes affecting quota data are:

- **Treatment of goods for processing:** *BPM6* captures in trade flows (recorded under services) only the explicit fees that are paid to the goods processor, rather than the full value of the goods entering and leaving the processing economy, in the case where the goods do not change ownership. This change will particularly affect those countries for which goods for processing are important in its trade; and will take longer for some countries to implement since it requires additional data collection. This modification will reduce openness for those countries where goods for processing is a significant component of their trade; variability could also be affected, especially, if revisions do not cover the full 13-year period used to estimate this variable. This change reduces the “double counting” of trade, which has been a concern in previous discussions on quota variables.
- **Migrant transfers:** under *BPM6*, the personal effects, financial assets, and liabilities of persons changing residence are no longer covered by a capital transfer.
- **SDR allocations:** The inclusion of the 2009 SDR allocations as liabilities in the financial account, and the inclusion of an equal size increase in SDR holdings as assets in the financial account, impacted the calculation of gross capital (financial) flows. Similarly, (cumulative) SDR allocations are shown in the IIP as liabilities. *BPM6* did not introduce changes in the treatment of SDR holdings in the IIP; SDR holdings were recorded in the IIP under both *BPM5* and *BPM6*. Unlike the other changes noted above, STA implemented this particular change effective with reporting of data for 2009, ensuring that the new SDR allocations implemented in that year would be recorded in all member country data consistent with the latest approved methodology. STA has traditionally used the IMF’s own data (provided by FIN) for recording positions and transactions related to SDRs in the *IFS*.
- **Reserve assets:** In the case where an economy has risk exposures that are closely related to its neighbor (perhaps due to substantial trade ties), and where it holds assets denominated in the currency of its neighbor, *BPM6* clarifies that these holdings should be excluded from reserves if that currency is not convertible. Under *BPM5*, it was less clear whether such holdings could be included in reserves.
- **Treatment of Special Purpose Entities (SPEs):** Some countries, i.e., the Netherlands, Cyprus, and Malta, have recently experienced significant revisions to their BOP and IIP data as a result of incorporating the SPEs in the *BPM6* estimates. Generally, the SPEs are located in important financial centers and have evolved to include both financial and specialized nonfinancial activities (e.g., intellectual property rights, research and development, trade, and others). In the external sector, the SPEs are treated as resident companies of the host countries, generally owned by multinational enterprise groups mostly active abroad and having weak ties with the host economy. In the financial sector, for example, these companies act as intra-group financial intermediaries, channeling funds whose volume and direction are regulated by the parent companies. The most affected entries in the external sector are direct and portfolio investment (flows and stocks), as well as the related investment income. To better gauge cross-border transactions and positions of resident SPEs in host countries, the IMF has recently launched an international data collection to identify SPEs statistics. The first set of data on SPEs under this initiative covering annual 2020 data are expected to be released around end-January 2022.

### Box 3. Direction of Trade Statistics

The Direction of Trade Statistics (DOTS) present the value of merchandise exports and imports disaggregated according to a country's primary trading partners. DOTS comprise official data of trade by geographical breakdown reported by country authorities to the IMF, or collected by the IMF from official sources, such as the United Nations COMTRADE and the EUROSTAT COMEXT databases. Official data are complemented with estimated data for individual countries that report (or publish) trade statistics with a delay, or do not publish trade statistics by partner country at all. The estimation of missing trade statistics based on counterpart trade and other information is a distinctive feature of DOTS. DOTS cover all IMF member countries, some non-member countries, and aggregates for the world and major areas. Monthly and quarterly data are available starting 1960. Annual data are available starting 1947.

Data reported to DOTS follow the concepts and definitions of the United Nations' International Merchandise Trade Statistics (IMTS 2010), which provide the conceptual framework and guidance for recording physical movements of goods between countries and areas. The term "merchandise" has a meaning that is close to the term "goods".

Following the IMTS 2010 methodology, exports are recorded on free-on-board (FOB) basis and imports are recorded on cost, insurance, and freight (CIF) basis. Imports include shipping and insurance costs up to the border of the importing country, while exports exclude these costs. In addition to differences in insurance and freight costs, there are several complications that can cause inconsistencies between exports to a partner and the partner's recorded imports FOB, or between imports FOB from a partner and the partner's recorded exports. The main reasons for inconsistent statistics on destination and origin for a given shipment are differences in classification, time of recording, exchange rates movements, shipment and reexport through intermediate points (e.g., Rotterdam, Hong Kong SAR), coverage, and processing errors. These asymmetries are not reconciled in the DOTS dataset. Official data by partner countries are published as reported.

For quota calculations, intra-trade imports between Hong Kong SAR and Macao SAR as well as re-exports of Hong Kong SAR from all countries to mainland China are removed from the total imports of mainland China to eliminate double counting.

On March 1, 2017, the IMF updated its DOTS dataset. New series of DOTS include improved monthly estimates for non-reporting countries and revised data for some reporting countries to realign with national sources.

The previous DOTS estimates were based on a methodology—developed in the early 1990s—based on partner country data, total trade, regional projections from the IMF World Economic Outlook, and trend extrapolations. The old methodology had several shortcomings, which led to time-series breaks in the estimated bilateral trade series and an excessive use of projections and trend extrapolations.

The new DOTS methodology relies on an expanded set of official sources of bilateral trade statistics; a new estimation procedure to impute missing observations of bilateral trade statistics; and other improvements, such as a streamlined list of partner countries and a refined assumption for converting imports CIF into exports FOB (and vice versa).

Exports and imports of non-reporting countries are estimated based on the assumption of symmetry with the values of imports and exports, respectively, declared by their counterpart countries. A CIF/FOB adjustment of 6 percent is used for non-reporting countries. The value of exports is equal to the value of imports from a partner divided by 1.06; the value of imports is equal to the value of exports multiplied by 1.06.