

**COMMITTEE  
MEETING**

EB/CQuota/21/2

**CONFIDENTIAL**

July 30, 2021

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 Realigning Shares, and Quota Data Update**

Board Action: For **consideration** by the Committee of the Whole on Review of Quotas

Tentative Committee Meeting Date: **To be announced**

Issues for Discussion: Page 36

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.

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July 30, 2021

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

### EXECUTIVE SUMMARY

This paper provides background for an initial discussion on the quota formula and realigning quota shares under the Sixteenth General Review of Quotas (16<sup>th</sup> Review). A companion paper, to be discussed separately, covers issues related to the adequacy of Fund resources. No proposals are made at this stage, recognizing that further deliberations will be needed before the issues under discussion can begin to be narrowed down.

The paper takes stock of discussions on the **quota formula** to date. It builds on staff's earlier work, including by updating illustrative simulations of possible reforms of the formula that were discussed by Directors in the context of the 15<sup>th</sup> Review.

The paper also covers the broader issue of **realigning quota shares** under the 16<sup>th</sup> Review. Building on staff's previous work and Directors' discussions, it presents a range of simulations to illustrate the potential impact that different quota formulas, quota increases, and allocation mechanisms would have on the distribution of actual quota shares. All simulations protect the quota shares of the poorest members.

This paper also presents the **annual update of the quota database**, extended by one year through 2019. The aggregate calculated quota share (using the current formula) of Emerging Market and Developing Countries (EMDCs) increased by 0.2 percentage points (pp) to 50.0 percent, reversing a small decline in their share in the previous update. The rise in the EMDCs' share is driven by an increase for Asia, notably China. The share of major advanced economies (AEs) declined by 0.2 pp. Aggregate out-of-lineness based on the current quota formula increased further to 14.1 pp.

Approved By  
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## Glossary

AEs	Advanced Economies
AQS	Actual Quota Share
CQS	Calculated Quota Share
EMDCs	Emerging Market and Developing Countries
EMDEs	Emerging Market and Developing Economies
ICP	International Comparison Program
IDA	International Development Association
LDCs	Least Developed Countries
LICs	Low Income Countries
LIDCs	Low Income Developing Countries
MAEs	Major Advanced Economies
OAEs	Other Advanced Economies
OOL	Out-of-lineness
pp	Percentage Points
PPP	Purchasing Power Parity
PRGT	Poverty Reduction and Growth Trust
QFR	Quota Formula Review (2013)
VFCS	Voluntary Financial Contributions

## INTRODUCTION

**1. The Board of Governors has requested the Executive Board to work on the 16<sup>th</sup> Review, which shall be concluded no later than December 15, 2023.**<sup>1</sup> As set out in the Board of Governors’ Resolution, the Executive Board is requested to revisit the adequacy of quotas and continue the process of IMF governance reform, including a new quota formula as a guide, and ensure the primary role of quotas in IMF resources. Any adjustment in quota shares would be expected to result in increases in the quota shares of dynamic economies in line with their relative positions in the world economy and hence likely in the share of emerging market and developing countries as a whole, while protecting the voice and representation of the poorest members.

**2. This paper is intended as background for an initial discussion under the 16<sup>th</sup> Review in line with the Executive Board’s work program.**<sup>2</sup> It discusses issues related to reforms of the quota formula and realignment of quota shares, based on updated quota data through 2019. It builds on feedback provided by Directors on these issues during earlier discussions, including in the context of the 15<sup>th</sup> Review and, more recently, at an informal Board meeting on June 25.<sup>3</sup> A companion paper, also to be discussed in September, addresses issues related to the size of the Fund and the mix of quota and borrowed resources.<sup>4</sup> Both papers seek to facilitate initial discussions on some of the key issues for the 16<sup>th</sup> Review. No proposals are made at this stage, recognizing that further deliberations will be needed before the issues under discussion can begin to be narrowed down.

**3. While the quota formula can help guide adjustments in quota shares, the paper also discusses other considerations relevant to realigning quotas.** The Articles of Agreement set out the key roles for quotas, but do not indicate how members’ quotas should be determined. In practice, quotas have been related to, but not strictly determined by, economic factors. The quota formula seeks to broadly capture these factors as well as the multiple roles of quotas, and it has frequently served as a guide to distribute quota increases to better reflect members’ relative positions in the world economy. However, various other considerations have historically also played a role in allocating quota increases, including actual quota shares, protections for certain parts of the membership (e.g., for the poorest members), floors on the maximum decline in quota shares, etc. The Executive Board has broad discretion in setting out these considerations, as it develops its proposal for an adjustment in quotas for consideration by the Board of Governors.

<sup>1</sup> Board of Governors Resolution No. 75-1, adopted on February 7, 2020. For further background, see also [Fifteenth and Sixteenth General Review of Quotas—Report of the Executive Board to the Board of Governors \(1/16/20\)](#).

<sup>2</sup> The discussion of this paper will take place in a Committee of the Whole format. Under Rule D-3 of the Fund’s Rules and Regulations, work on a general review of quotas is to be carried out in the first instance in a Committee of the Whole appointed for this purpose by the Executive Board at least one year prior to the date by which a general review of quotas must be undertaken or promptly if it is decided to conduct a general review before the date by which such a review must be undertaken. The Committee of the Whole for the 16<sup>th</sup> Review was established on December 13, 2019 (DEC/A/14207).

<sup>3</sup> For staff’s background presentation, see [IMF Resources and Governance—2021—Briefing on the Sixteenth General Review of Quotas—Quota Formula and Realigning Quota Shares](#) (June 25, 2021, initially dated June 23, 2021).

<sup>4</sup> *Sixteenth General Review of Quotas—Adequacy of Fund Resources—Initial Considerations* (EB/CQuota/21/1, 7/19/21).

**4. The paper is organized as follows.** The next section takes stock of discussions on the quota formula to date and the subsequent section presents a set of illustrative simulations of possible reforms of the formula. This is followed by a section that discusses broader issues of realigning quota shares and updates a set of simulations from the 15<sup>th</sup> Review to illustrate the potential impact on the distribution of actual quota shares. The following section discusses a possible update of country groupings, to align the groupings for quota purposes with those used in the World Economic Outlook (*WEO*). A subsequent section covers enterprise risks before the paper concludes with issues for discussion. The analysis in this paper is based on the updated quota data through 2019, and the impact of the data update is discussed in more detail in Appendix I to this paper. Appendix II provides a short summary of recent discussions on the quota formula and realignment of quota shares and Appendix III presents the lists of countries that are under-represented based on illustrative formulas.<sup>5</sup>

## QUOTA FORMULA—TAKING STOCK

**5. The quota formula has often served as a helpful guide for changes in the structure of quotas, rather than a mechanical rule.** The Fund has broad discretion to decide the considerations that should guide decisions on quotas. In practice, the formula has provided an important indicator and, since the 8<sup>th</sup> Review, a significant part of overall quota increases has been distributed based on the formula. However, history provides many examples where other relevant considerations (outside the formula) have been taken into account when deciding on adjustments in members' quotas. Experience also suggests that the formula is more likely to be used in circumstances where it is widely recognized as providing a reasonable measure of members' relative economic positions.

**6. Directors have underscored that the formula should conform to certain principles.** It should (i) be simple and transparent, so that the basis for differences in relative quota shares is readily understandable, (ii) be consistent with the multiple roles of quotas,<sup>6</sup> (iii) produce results that are broadly acceptable to the membership, and (iv) be feasible to implement statistically based on timely, high quality and widely available data. These four principles helped guide the Executive Board's deliberations on the new formula in 2008, and most Directors agreed in the context of the 15<sup>th</sup> Review that they remain valid—a view that was widely reaffirmed at the informal Board meeting on June 25.<sup>7</sup>

**7. The current quota formula was agreed as part of a package of quota and voice reforms in 2008 (2008 Reform).** This was the first change in the quota formula since 1982/83 and was

<sup>5</sup> Supplement 1 presents additional technical background work and Supplement 2, prepared jointly with STA, provides a detailed description of the construction of the quota database. An Excel file with country-by-country data and results will be distributed separately to Executive Directors.

<sup>6</sup> These include their key role in determining the Fund's financial resources, their role in decisions on members' access to Fund resources, and their close link with members' voting rights. Quota shares also determine members' shares in general allocations of SDRs.

<sup>7</sup> [Progress on the Fifteenth General Review of Quotas—Report of the Executive Board to the Board of Governors](#) (11/15/18).

viewed as a major improvement over the previous five-formula system.<sup>8</sup> The new formula included four variables expressed in shares, and was substantially simpler and more transparent than the previous multi-formula approach. It also included a compression factor to reduce the dispersion of calculated quota shares (Box 1).<sup>9</sup> Some of the variables were also updated and modernized from those used in the previous formulas. While many members had reservations about aspects of the new formula, the Executive Board considered that it provided a reasonable basis for guiding the second round of ad hoc quota increases agreed under the 2008 Reform.

## 8. **Despite criticism, the quota formula has remained unchanged since the 2008 Reform.**

- **It was used in the 14<sup>th</sup> Review to distribute part of the overall increase in quotas in the wake of the global financial crisis.** When the new formula was agreed in 2008, the Executive Board considered that further work was needed in several areas before the formula was used again, in particular regarding openness and variability. However, in response to the global financial crisis, the timetable for the 14<sup>th</sup> Review was brought forward by two years as part of a far-reaching package of quota and governance reforms that was agreed in late 2010. The agreement included a doubling of quotas and a major realignment of quota shares among members, with the quota formula playing an important but not the only role in allocating the quota increase.<sup>10</sup>
- **As part of the agreed package on the 14<sup>th</sup> Review, the Board completed a comprehensive review of the quota formula in January 2013.** The Quota Formula Review (QFR) covered a wide range of issues, including those highlighted at the conclusion of the 2008 Reform and other issues such as Voluntary Financial Contributions (Appendix II, Table II.1).<sup>11</sup> The Executive Board's report to the Board of Governors concluded that the discussions had provided important building blocks for agreement on a new quota formula that better reflects members' relative positions in the global economy and that further discussions on the formula would take place under the 15<sup>th</sup> Review.
- **Extensive discussions on the quota formula continued in the context of the 15<sup>th</sup> Review.**<sup>12</sup> Discussions built on the progress already made, including the outcome of the QFR in 2013. Most Directors reiterated that the principles that guided the 2008 quota formula reform remained valid. However, views continued to differ, including among those who believed the current formula is working well, those who considered that it required only

<sup>8</sup> [Reform of Quota and Voice in the International Monetary Fund—Report of the Executive Board to the Board of Governors](#) (3/28/08).

<sup>9</sup> The inclusion of PPP GDP and compression in the formula had been one of the most difficult aspects of the deliberations, and the Board decided to include these elements in the formula for a period of 20 years (i.e., until 2028), after which the scope for retaining them would be reviewed in light of progress toward convergence between market rate and PPP GDP in EMDCs, and the overall objective of ensuring adequate voice and participation for all members.

<sup>10</sup> For more details, see [IMF Quota and Governance Reform—Elements of an Agreement](#) (10/31/10).

<sup>11</sup> Table II.1 in Appendix II gives an overview of the issues discussed during the QFR, the 15<sup>th</sup> Review, and the latest quota data updates.

<sup>12</sup> [Fifteenth and Sixteenth General Review of Quotas—Report of the Executive Board to the Board of Governors](#) (1/16/20).

limited reform, and those who considered that a more streamlined formula with a larger weight on GDP would better capture members' relative economic positions. Discussions also explored alternative approaches to distributing quota increases that could be considered to help facilitate an agreement (Appendix II). Ultimately, the required support for a quota increase was not secured and the Review was concluded with no agreement on a new quota formula.

### Box 1. The Quota Formula

The current quota formula was agreed in 2008. It includes four variables (GDP, openness, variability, and reserves), expressed in shares of global totals, with the variables assigned weights totaling to 1.0. The formula also includes a compression factor that reduces dispersion in calculated quota shares (CQS). The formula is:

$$CQS = (0.5 * GDP Blend + 0.3 * Openness + 0.15 * Variability + 0.05 * Reserves)^{Compression}$$

where:

*CQS* = calculated quota share;

*GDP Blend* = a blend of GDP converted at market exchange rates (MER) and PPP rates averaged over a three-year period. The weights of MER and PPP GDP are 0.60 and 0.40, respectively;

*Openness* = the annual average of the sum of current payments and current receipts (goods, services, income, and transfers) for a five-year period;

*Variability* = variability of current receipts and net capital flows (measured as the standard deviation from a centered three-year trend over a thirteen-year period);

*Reserves* = twelve-month average over one year of official reserves (foreign exchange, SDR holdings, reserve position in the Fund, and monetary gold); and

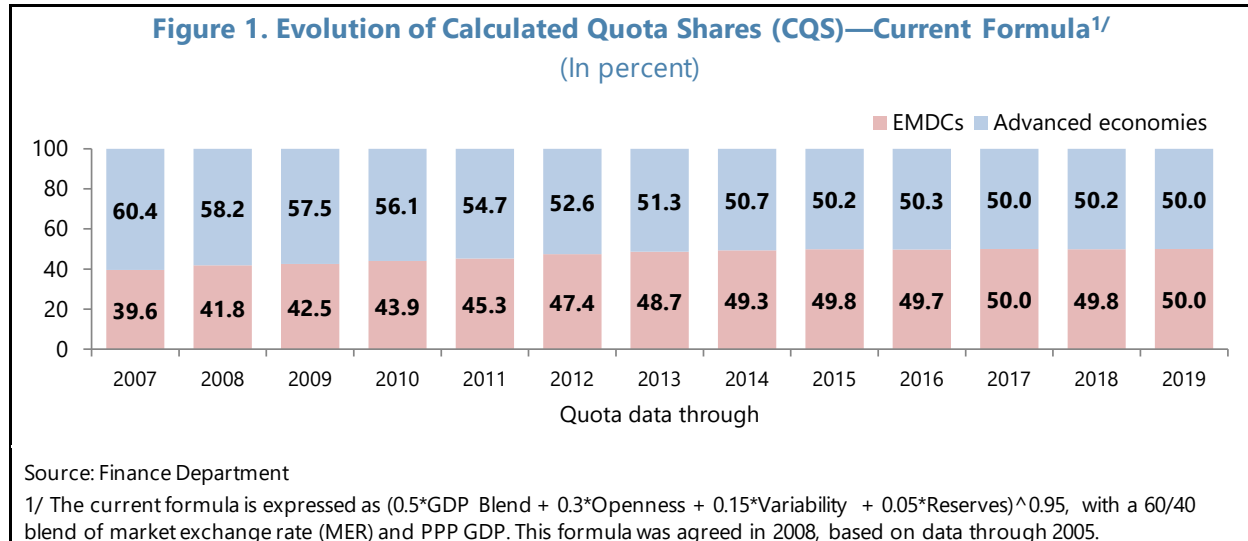
*Compression* = a compression factor of 0.95. The compression factor is applied to the uncompressed calculated quota shares which are then rescaled to sum to 100.

## DATA UPDATE AND ILLUSTRATIVE SIMULATIONS

**9. Staff has updated the quota database by one year through 2019.** Compared with the previous quota database, the annual quota data update results in an increase in the calculated quota share (based on the current formula) of EMDCs by 0.2 percentage points (pp) to 50.0 percent (Figure 1 and Table 1). This reverses a small decline in the EMDCs' share (by 0.2 pp) in the 2020 update (data through 2018), which largely reflected the outcome of the 2017 International Comparison Program (ICP) and its impact on PPP GDP.<sup>13</sup> There was considerable heterogeneity within the group of EMDCs and the rising EMDCs' share was driven by an increase in the share of Asia, while the Middle East and Western Hemisphere recorded a slight decline. The share of major AEs declined (by 0.2 pp) and the share of other AEs remained unchanged. Aggregate out-of-lininess based on the current quota formula has further increased to 14.1 pp with the current data update

<sup>13</sup> The 2017 ICP resulted in upward revisions of the PPP factor, and consequently, downward revisions of PPP GDP, for a majority of Fund members, especially EMDCs and including some large EMDCs' members; see [2020 Quota Data Update](#) (10/27/20), Appendix I for detail.

and is well above the pre-14<sup>th</sup> Review level. At the aggregate level, AEs are over-represented and EMDCs under-represented by 7.7 pp, with China's underrepresentation accounting for 52 percent of overall out-of-lineness (see Appendix I for more detail).<sup>14</sup>



<sup>14</sup> Country by country data will be circulated to the Board in Excel format.

**Table 1. Updated Quota Formula Variables<sup>1/</sup>**  
(In percent)

	14 <sup>th</sup> Review	CQS (Current Formula)		MER GDP		PPP GDP		GDP Blend		Openness		Variability		Reserves	
		Current	Previous	Current	Previous	Current	Previous	Current	Previous	Current	Previous	Current	Previous	Current	Previous
<b>Advanced economies</b>	<b>57.6</b>	<b>50.0</b>	<b>50.2</b>	<b>55.8</b>	<b>56.6</b>	<b>39.6</b>	<b>40.2</b>	<b>49.3</b>	<b>50.0</b>	<b>57.3</b>	<b>57.1</b>	<b>52.1</b>	<b>52.0</b>	<b>28.2</b>	<b>27.7</b>
<b>Major advanced economies</b>	<b>43.4</b>	<b>35.3</b>	<b>35.5</b>	<b>45.8</b>	<b>46.4</b>	<b>32.4</b>	<b>32.9</b>	<b>40.4</b>	<b>41.0</b>	<b>37.6</b>	<b>37.6</b>	<b>31.9</b>	<b>31.9</b>	<b>16.5</b>	<b>16.0</b>
United States	17.4	14.9	14.9	24.4	24.5	16.2	16.3	21.1	21.2	13.6	13.4	11.2	11.2	1.2	1.1
Japan	6.5	4.9	5.0	5.9	6.1	4.2	4.3	5.2	5.4	3.9	4.0	4.8	4.8	11.5	11.2
Germany	5.6	4.8	4.9	4.6	4.6	3.6	3.6	4.2	4.2	7.1	7.1	5.2	5.0	0.6	0.6
France	4.2	3.1	3.1	3.2	3.3	2.5	2.5	2.9	3.0	3.9	4.0	2.8	2.7	0.6	0.6
United Kingdom	4.2	3.4	3.5	3.3	3.4	2.5	2.5	3.0	3.1	4.2	4.3	3.9	4.4	1.4	1.3
Italy	3.2	2.3	2.3	2.4	2.5	2.0	2.1	2.3	2.3	2.5	2.5	2.3	2.2	0.5	0.5
Canada	2.3	1.9	1.9	2.0	2.0	1.5	1.5	1.8	1.8	2.4	2.4	1.6	1.6	0.8	0.8
<b>Other advanced economies</b>	<b>14.3</b>	<b>14.7</b>	<b>14.7</b>	<b>10.0</b>	<b>10.1</b>	<b>7.2</b>	<b>7.3</b>	<b>8.9</b>	<b>9.0</b>	<b>19.7</b>	<b>19.6</b>	<b>20.2</b>	<b>20.2</b>	<b>11.6</b>	<b>11.6</b>
Spain	2.0	1.7	1.7	1.6	1.7	1.5	1.5	1.6	1.6	1.9	1.9	1.9	1.9	0.5	0.5
The Netherlands	1.8	2.0	2.0	1.1	1.1	0.8	0.8	0.9	0.9	3.6	3.6	2.6	2.7	0.1	0.1
Australia	1.4	1.3	1.4	1.7	1.7	1.0	1.0	1.4	1.4	1.3	1.3	1.2	1.3	0.4	0.5
Belgium	1.3	1.1	1.1	0.6	0.6	0.5	0.5	0.6	0.6	1.8	1.8	1.6	1.5	0.2	0.2
Switzerland	1.2	1.9	1.8	0.9	0.9	0.5	0.5	0.7	0.7	2.4	2.3	3.0	2.8	7.0	7.0
Sweden	0.9	0.9	0.9	0.6	0.7	0.4	0.4	0.6	0.6	1.0	1.1	1.3	1.3	0.5	0.5
Austria	0.8	0.7	0.7	0.5	0.5	0.4	0.4	0.5	0.5	0.9	0.9	0.9	0.9	0.1	0.1
Norway	0.8	0.6	0.7	0.5	0.5	0.3	0.3	0.4	0.4	0.7	0.7	1.1	1.2	0.6	0.6
Ireland	0.7	1.0	1.0	0.4	0.4	0.3	0.3	0.4	0.4	2.0	1.7	1.1	1.3	0.0	0.0
Denmark	0.7	0.6	0.6	0.4	0.4	0.3	0.3	0.4	0.4	0.7	0.8	0.6	0.6	0.6	0.7
<b>EMDCs 2/</b>	<b>42.4</b>	<b>50.0</b>	<b>49.8</b>	<b>44.2</b>	<b>43.4</b>	<b>60.4</b>	<b>59.8</b>	<b>50.7</b>	<b>50.0</b>	<b>42.7</b>	<b>42.9</b>	<b>47.9</b>	<b>48.0</b>	<b>71.8</b>	<b>72.3</b>
<b>Africa</b>	<b>4.4</b>	<b>3.4</b>	<b>3.4</b>	<b>2.5</b>	<b>2.5</b>	<b>4.0</b>	<b>4.0</b>	<b>3.1</b>	<b>3.1</b>	<b>2.3</b>	<b>2.4</b>	<b>3.8</b>	<b>3.8</b>	<b>2.5</b>	<b>2.7</b>
South Africa	0.6	0.5	0.5	0.4	0.4	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4
Nigeria	0.5	0.6	0.6	0.5	0.5	0.8	0.8	0.6	0.6	0.3	0.3	0.6	0.6	0.4	0.4
<b>Asia</b>	<b>16.0</b>	<b>26.2</b>	<b>25.7</b>	<b>26.2</b>	<b>25.4</b>	<b>34.4</b>	<b>33.6</b>	<b>29.5</b>	<b>28.7</b>	<b>23.1</b>	<b>23.0</b>	<b>20.9</b>	<b>20.7</b>	<b>44.0</b>	<b>44.0</b>
China 3/	6.4	13.7	13.4	16.5	15.7	17.4	16.9	16.9	16.2	11.2	11.1	11.8	11.7	28.1	28.4
India	2.7	3.4	3.4	3.3	3.2	7.0	7.0	4.8	4.7	2.2	2.1	1.7	1.8	3.6	3.5
Korea	1.8	2.1	2.1	2.0	2.0	1.7	1.8	1.9	1.9	2.4	2.5	1.4	1.2	3.6	3.6
Indonesia	1.0	1.3	1.3	1.3	1.2	2.5	2.4	1.7	1.7	0.8	0.8	0.8	0.8	1.1	1.1
Singapore	0.8	1.4	1.4	0.4	0.4	0.4	0.4	0.4	0.4	2.4	2.4	1.9	1.8	2.5	2.6
Malaysia	0.8	0.7	0.7	0.4	0.4	0.7	0.7	0.5	0.5	0.9	0.9	0.7	0.7	0.9	0.9
Thailand	0.7	1.0	1.0	0.6	0.6	1.0	1.0	0.8	0.7	1.1	1.1	1.1	1.1	1.9	1.8
<b>Middle East, Malta and Turkey</b>	<b>6.7</b>	<b>6.6</b>	<b>6.7</b>	<b>4.5</b>	<b>4.5</b>	<b>6.7</b>	<b>6.8</b>	<b>5.4</b>	<b>5.4</b>	<b>5.5</b>	<b>5.7</b>	<b>8.9</b>	<b>8.8</b>	<b>9.2</b>	<b>9.9</b>
Saudi Arabia	2.1	1.5	1.5	0.9	0.9	1.3	1.3	1.1	1.0	1.0	1.0	2.5	2.5	4.5	4.6
Turkey	1.0	1.2	1.2	1.0	1.0	1.9	1.9	1.3	1.4	0.9	0.9	1.2	1.1	0.7	0.7
Iran	0.7	0.5	0.6	0.6	0.5	0.9	0.9	0.7	0.7	0.3	0.3	0.4	0.4	0.1	1.0
<b>Western Hemisphere</b>	<b>7.9</b>	<b>6.7</b>	<b>6.8</b>	<b>6.3</b>	<b>6.6</b>	<b>7.8</b>	<b>8.0</b>	<b>6.9</b>	<b>7.2</b>	<b>5.0</b>	<b>5.1</b>	<b>6.0</b>	<b>6.1</b>	<b>7.8</b>	<b>7.7</b>
Brazil	2.3	1.9	2.0	2.3	2.4	2.5	2.5	2.4	2.4	1.0	1.1	1.4	1.6	3.4	3.4
Mexico	1.9	1.7	1.7	1.4	1.4	2.0	2.1	1.7	1.7	1.8	1.8	1.4	1.5	1.6	1.6
Venezuela	0.8	0.2	0.3	0.1	0.2	0.2	0.3	0.2	0.3	0.1	0.2	0.5	0.5	0.0	0.0
Argentina	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.7	0.8	0.3	0.3	0.5	0.5	0.5	0.5
<b>Transition economies</b>	<b>7.2</b>	<b>7.1</b>	<b>7.1</b>	<b>4.7</b>	<b>4.5</b>	<b>7.4</b>	<b>7.4</b>	<b>5.8</b>	<b>5.7</b>	<b>6.7</b>	<b>6.7</b>	<b>8.2</b>	<b>8.6</b>	<b>8.4</b>	<b>8.1</b>
Russian Federation	2.7	2.2	2.3	2.0	1.9	3.1	3.2	2.4	2.4	1.7	1.7	1.9	2.5	3.8	3.5
Poland	0.9	1.0	1.0	0.7	0.7	1.0	1.0	0.8	0.8	1.1	1.1	0.9	0.9	1.0	1.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Memorandum Items:</b>															
EU-27 4/	26.1	23.4	23.3	18.4	18.5	15.7	15.9	17.3	17.5	32.0	32.0	27.4	27.0	7.5	7.4
LICs 5/	3.3	2.4	2.4	1.8	1.7	3.1	3.0	2.3	2.2	1.6	1.6	2.1	2.2	1.5	1.5

Source: Finance Department.

1/ Data columns marked as "current" refer to the 2021 quota data update (data through 2019); "previous" refers to the 2020 quota data update (data through 2018).

2/ Including Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia.

3/ Including China, P.R., Hong Kong SAR, and Macao SAR.

4/ Reflects EU membership as of end-January 2021 and excludes the United Kingdom.

5/ Currently PRGT-eligible countries (69 members).

**10. In the context of the 15<sup>th</sup> Review, staff presented illustrative simulations of possible reforms of the quota formula.** These simulations, which built on the outcome of the QFR and further feedback from Directors during the 15<sup>th</sup> Review discussions, have (i) retained GDP as the most important variable, and explored different options for the relative weight of market and PPP GDP; (ii) retained openness with a sizable weight, and explored possible options to help address the concerns expressed about this variable; (iii) excluded variability with different options for redistributing its weight;<sup>15</sup> (iv) retained reserves with its current 5 percent weight; and (v) explored the impact of varying the compression factor.

**11. Staff has updated these simulations based on the latest data** (Figure 2 and Table 2). The results are broadly similar to those presented in the context of the 15<sup>th</sup> Review.<sup>16, 17</sup>

- *Set 1: Simplification of the current formula – dropping variability, keeping current GDP and openness measures.* Compared to the current formula, these formulas generally reduce the CQS of other AEs and increase that of major AEs and, to a lesser extent, also of EMDCs.<sup>18</sup> The shifts are larger when the weight of openness is also reduced. The majority of large countries gain from dropping variability, while around one quarter of smaller countries also gain.<sup>19</sup>
- *Set 2: Same as Set 1, but with different compositions of GDP blend.* Increasing the weight of PPP GDP in the GDP blend leads to a higher CQS for EMDCs relative to the current formula. More EMDCs and smaller countries gain with an increased weight for PPP GDP relative to Set 1.
- *Set 3: Same as Set 1 but with different openness measures.*<sup>20</sup> Capping openness has been discussed as a possible means to address some of the shortcomings identified with this variable. Caps tend to reduce the CQS of other AEs and increase the CQS of major AEs and EMDCs. Also, there is generally a larger number of gainers among EMDCs, LICs, and smaller countries compared with Set 1, including when the weight of openness is reduced, as

<sup>15</sup> As noted in the previous section, this reform received considerable support in the 15<sup>th</sup> Review, though some Directors have conditioned their support for dropping variability on other elements of the reform package. As discussed in previous papers (and more recently in Annex V of [Fifteenth General Review of Quotas—Further Considerations—Annexes \(1/5/18\)](#), staff has undertaken extensive work to explore the links between variability and use of Fund resources, or broader balances of payments difficulties, and has found no significant evidence of such a link.

<sup>16</sup> Only the broad results are discussed in this section, with the implications for individual members' quota shares reported in an Excel file supplementing this paper.

<sup>17</sup> See [Fifteenth General Review of Quotas—Additional Considerations and Data Update \(7/6/18\)](#).

<sup>18</sup> Table II.6 in Supplement 1, Annex I presents also a simulation that drops variability and allocates all of its weight to openness, while keeping the current GDP and openness measures. In this simulation, the distribution of CQS would be broadly unchanged relative to the current formula across the largest individual countries and major country groups, highlighting the high correlation between variability and openness.

<sup>19</sup> Countries are classified as "large" if their current GDP blend share exceeds 1.0 percent, while the remainder are considered as "small".

<sup>20</sup> As discussed in Supplement 1, Annex I, staff has explored the use of a cap to address one possible concern with the openness variable, namely that for some countries it can generate CQS that appear very large in relation to other measures of their relative economic positions.

capping openness redistributes the very large boost received by some countries under the current measure across the rest of the membership.

- *Set 4: Same as Set 1, but with different degrees of compression.* More compression (i.e., lowering the value of the compression factor) reduces the share of the largest economies and increases the share of all other members. As a result, it leads to the largest number of gainers among EMDCs and LICs, as well as among smaller countries. Reducing the degree of compression has the opposite impact, with gains for the largest members and reduced shares for all other members.

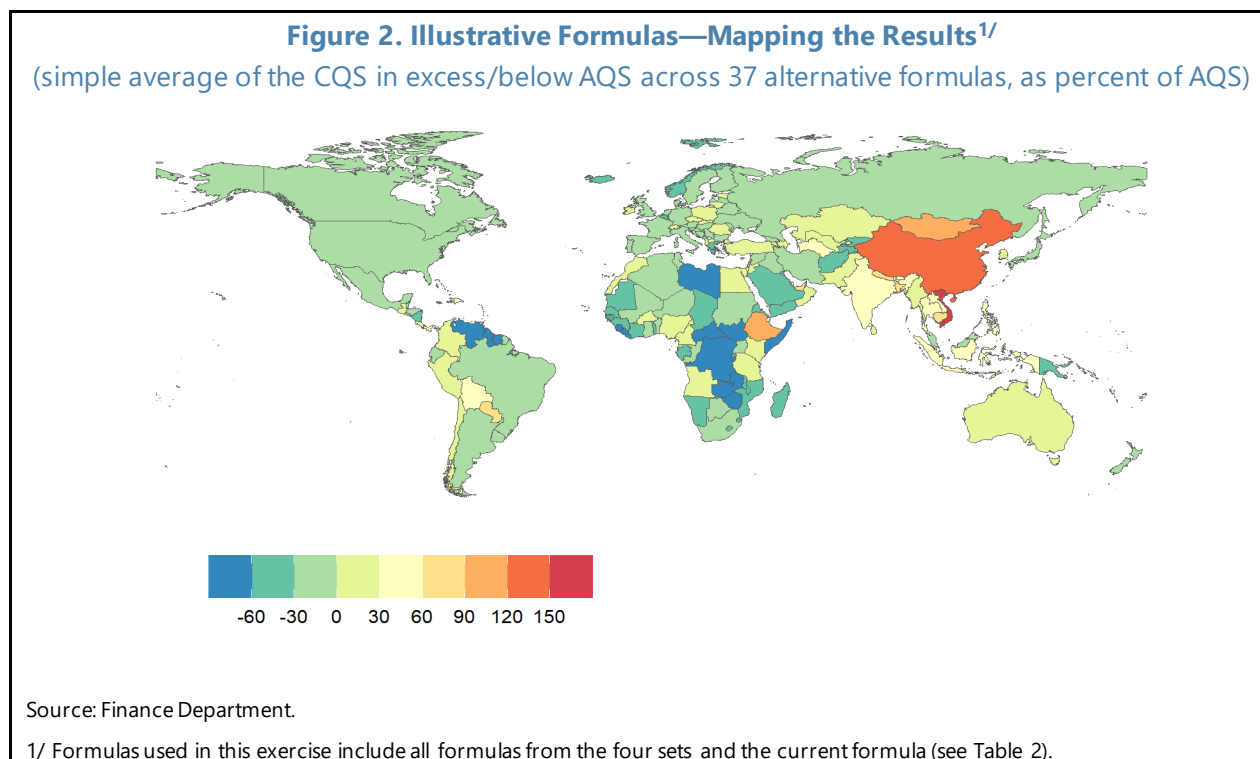


Table 2. Illustrative Formulas—Summary Results<sup>1/</sup>

Illustrative Formulas														
Set and Number	Weights		Additional Specification	Calculated Quota Share (in percent)				Number of Gainers 2/					Out-of-lineness (OOL)	
	GDP Blend	Openness		Major AEs	Other AEs	EMDCs	LICs	Total	AEs (27)	EMDCs excl. LICs (94)	LICs (69)	Large (18)		Small (172)
1.1	57.5	37.5		36.3	13.8	49.8	2.4	55	8	27	20	13	42	14.0
<b>1.2</b>	<b>60</b>	<b>35</b>		<b>36.4</b>	<b>13.6</b>	<b>50.0</b>	<b>2.4</b>	<b>61</b>	<b>8</b>	<b>29</b>	<b>24</b>	<b>15</b>	<b>46</b>	<b>14.0</b>
1.3	65	30		36.6	13.0	50.4	2.5	58	7	28	23	14	44	14.0
1.4	70	25		36.7	12.5	50.8	2.5	54	5	26	23	12	42	14.0
2.1.a	57.5	37.5	50/50 GDP Blend (MER/PPP)	35.6	13.6	50.7	2.5	69	5	33	31	12	57	14.6
2.1.b	57.5	37.5	55/45 GDP Blend (MER/PPP)	36.0	13.7	50.3	2.5	66	8	30	28	14	52	14.3
2.1.c	57.5	37.5	65/35 GDP Blend (MER/PPP)	36.7	13.9	49.4	2.4	51	9	24	18	13	38	13.8
2.2.a	60	35	50/50 GDP Blend (MER/PPP)	35.7	13.4	51.0	2.5	71	3	34	34	11	60	14.6
2.2.b	60	35	55/45 GDP Blend (MER/PPP)	36.0	13.5	50.5	2.5	61	5	28	28	12	49	14.3
2.2.c	60	35	65/35 GDP Blend (MER/PPP)	36.8	13.6	49.6	2.4	49	8	24	17	14	35	13.7
2.3.a	65	30	50/50 GDP Blend (MER/PPP)	35.7	12.8	51.4	2.6	65	1	32	32	9	56	14.6
2.3.b	65	30	55/45 GDP Blend (MER/PPP)	36.1	12.9	50.9	2.5	62	5	30	27	13	49	14.3
2.3.c	65	30	65/35 GDP Blend (MER/PPP)	37.0	13.1	49.9	2.4	48	7	20	21	13	35	13.7
2.4.a	70	25	50/50 GDP Blend (MER/PPP)	35.8	12.3	51.9	2.6	64	2	32	30	10	54	14.8
2.4.b	70	25	55/45 GDP Blend (MER/PPP)	36.3	12.4	51.4	2.6	59	3	29	27	11	48	14.4
2.4.c	70	25	65/35 GDP Blend (MER/PPP)	37.1	12.6	50.3	2.5	52	7	24	21	14	38	13.7
3.1.a	57.5	37.5	Nominal openness cap - 85 <sup>th</sup> percentile	37.1	12.8	50.0	2.5	80	12	34	34	17	63	13.2
3.1.b	57.5	37.5	Nominal openness cap - 75 <sup>th</sup> percentile	37.5	12.4	50.1	2.5	86	14	39	33	17	69	13.1
3.1.c	57.5	37.5	Openness shares cap - 1.8	37.9	11.6	50.5	2.5	86	12	43	31	17	69	13.3
3.1.d	57.5	37.5	Openness shares cap - 1.5	38.0	11.2	50.9	2.5	82	10	39	33	16	66	13.7
3.2.a	60	35	Nominal openness cap - 85 <sup>th</sup> percentile	37.2	12.6	50.2	2.5	76	11	33	32	17	59	13.3
3.2.b	60	35	Nominal openness cap - 75 <sup>th</sup> percentile	37.5	12.2	50.2	2.5	81	12	36	33	17	64	13.3
<b>3.2.c</b>	<b>60</b>	<b>35</b>	<b>Openness shares cap - 1.8</b>	<b>37.9</b>	<b>11.5</b>	<b>50.6</b>	<b>2.5</b>	<b>83</b>	<b>12</b>	<b>40</b>	<b>31</b>	<b>17</b>	<b>66</b>	<b>13.4</b>
3.2.d	60	35	Openness shares cap - 1.5	37.9	11.1	51.0	2.5	81	10	38	33	16	65	13.8
3.3.a	65	30	Nominal openness cap - 85 <sup>th</sup> percentile	37.2	12.2	50.6	2.5	65	8	31	26	15	50	13.6
3.3.b	65	30	Nominal openness cap - 75 <sup>th</sup> percentile	37.5	11.9	50.6	2.5	69	10	31	28	16	53	13.5
3.3.c	65	30	Openness shares cap - 1.8	37.8	11.3	50.9	2.5	77	11	36	30	17	60	13.7
3.3.d	65	30	Openness shares cap - 1.5	37.8	10.9	51.2	2.6	76	9	35	32	15	61	14.0
4.1.a	57.5	37.5	Higher degree of compression (0.925)	35.4	14.2	50.4	2.7	124	12	61	51	13	111	14.2
4.1.b	60	35	Higher degree of compression (0.925)	35.5	13.9	50.6	2.7	117	11	56	50	12	105	14.1
4.1.c	65	30	Higher degree of compression (0.925)	35.6	13.4	51.0	2.7	109	8	52	49	13	96	14.1
4.1.d	70	25	Higher degree of compression (0.925)	35.7	12.8	51.4	2.8	106	7	50	49	13	93	14.2
4.2.a	57.5	37.5	Lower degree of compression (0.975)	37.3	13.5	49.3	2.2	19	7	11	1	14	5	14.0
4.2.b	60	35	Lower degree of compression (0.975)	37.3	13.2	49.5	2.2	19	6	11	2	13	6	13.9
4.2.c	65	30	Lower degree of compression (0.975)	37.5	12.7	49.9	2.3	23	5	14	4	12	11	13.9
4.2.d	70	25	Lower degree of compression (0.975)	37.6	12.1	50.3	2.3	26	3	17	6	11	15	14.0
Memorandum Items														
	Quota Share (in percent)				Number of under-represented countries					Out-of-lineness (OOL)				
	Major AEs	Other AEs	EMDCs	LICs	Total	AEs (27)	EMDCs excl. LICs	LICs (69)	Large (18)		Small (172)			
14 <sup>th</sup> Review - Actual Quota Shares (AQS)	43.4	14.3	42.4	3.3										
Current Formula - Calculated Quota Shares (CQS)	35.3	14.7	50.0	2.4	75	8	52	15	5	70				14.1

Source: Finance Department.

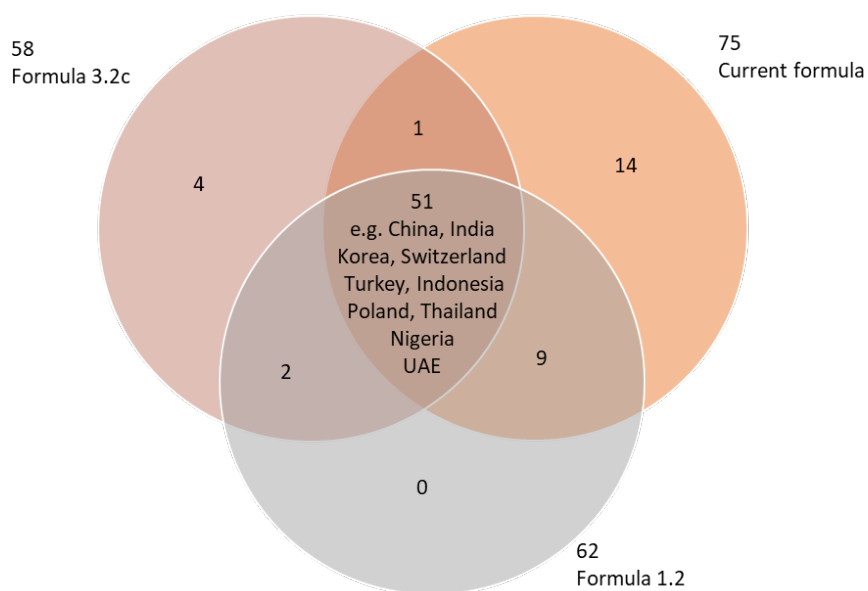
1/ Formulas highlighted in bold are used later in the paper in illustrative allocations.

2/ Relative to the current formula. Large members are those whose share in the current GDP blend variable is above 1 percent.

**12. The results indicate considerable consistency across the different simulation sets, with many countries under-represented in one set also under-represented in other sets.** Figure 3 illustrates this point for a subset of the formulas. In addition to the current quota formula, included here for comparison, results are shown for Formula 1.2, which eliminates variability and redistributes two-thirds of its weight to GDP and one-third to openness, and also for Formula 3.2c, which is the same as Formula 1.2 except that it also includes a cap on openness, as discussed above. Under these three formulas, the maximum number of under-represented members is 75 (current formula), while the minimum is 58 (Formula 3.2c). 51 members are under-represented under all three formulas.<sup>21</sup> For the full set of 37 illustrative formulas, there are 38 members that are under-represented under all formulas (Figure 4). The overall degree of out-of-lineness is also broadly consistent across different formulas, ranging from 13.1 pp to 14.8 pp (Table 2).

**13. In the context of the 15<sup>th</sup> Review, staff presented also results of a technical exercise to identify reforms near the midpoint of a range of views expressed by Directors.** In the 15<sup>th</sup> Review, this approach reflected the midpoint between the current formula and a GDP-blend only formula. As discussions on the 16<sup>th</sup> Review are only just beginning and Directors have not yet had an opportunity to discuss formally quota formula issues, it would seem premature to present such a “middle” between different views at this point. Staff could, however, revisit this approach again in the future, if warranted.

**Figure 3. Illustrative Formulas—Number of Under-represented Members for Three Formulas<sup>1/</sup>**

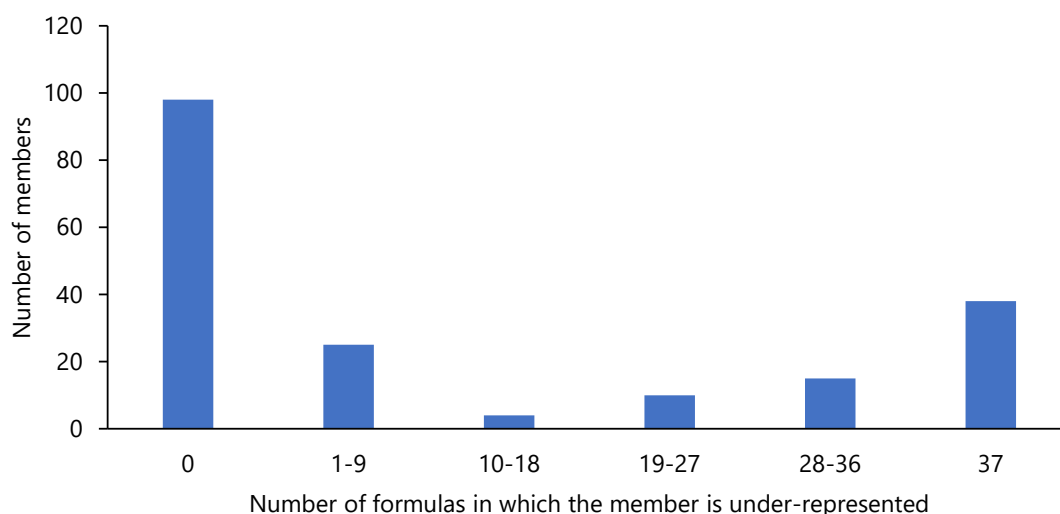


Source: Finance Department.

<sup>1/</sup> The numbers outside the circle indicate the total number of under-represented countries under each formula. The numbers inside one/two/three circle(s) indicate the number of under-represented countries under one/two/three formula(s). Among the 51 countries that are under-represented under the three formulas, the 10 countries with the largest AQS are listed in the figure (see full list in Appendix III). 109 countries are over-represented under the three formulas.

<sup>21</sup> See Appendix III for more detail.

**Figure 4. Illustrative Formulas—Number of Under-represented Members for Different Formulas<sup>1/</sup>**



Source: Finance Department.

1/ For the full list of countries under-represented under all different formulas, see Appendix III.

## REALIGNING QUOTA SHARES

### A. Background

**14. Adjustment in quota shares to better reflect members' relative economic positions is a key goal of the 16<sup>th</sup> Review.** In addition to assessing the overall adequacy of quota resources, the regular five-yearly general review of quotas provides an opportunity to realign quota shares. Given the central role played by quotas in the Fund's finances and governance structure, ensuring that quota shares evolve in line with members' changing relative positions in the world economy remains central to the Fund's continued credibility and overall effectiveness.

**15. Various approaches have been used to distribute general quota increases in the past (Table 3, Figure 5):**

- Prior to the 14<sup>th</sup> Review, these typically included a sizable equiproportional element, which goes to all members and leaves existing quota shares unchanged, and a selective element, which is also distributed to all members but based on the results of the quota formula and results in a partial adjustment of actual quota shares (AQS) towards CQS.
- Given the focus on governance reforms in the 14<sup>th</sup> Review, the general quota increase was distributed based on a combination of a selective increase and ad hoc increases. Ad hoc increases in quotas for a subset of members can, for example; lead to a larger increase for the members whose shares are considered substantially out of line, or limit the dilution of

AQS for some other members (including the protection of the poorest members).<sup>22</sup> In the 14<sup>th</sup> Review, 60 percent of the increase was distributed on a selective basis to all members, and the remaining 40 percent as ad hoc increases for a subset of members, primarily based on shares in the compressed GDP blend variable. The ad hoc increase was constrained by caps on maximum increases, floors on maximum declines, and protection of the poorest.<sup>23</sup>

**16. In practice, shifts in actual quota shares toward calculated quota shares in previous reviews have been only partial.** The extent of any realignment depends on the size of the overall quota increase and how it is distributed. The overall degree of realignment can be measured by the degree in which deviations between AQS and quota formula based CQS are reduced. In past reviews, convergence toward CQS was expressed in terms of the adjustment coefficient,<sup>24</sup> which ranged between 1.7 and 28.0 percent from the 5<sup>th</sup> to the 11<sup>th</sup> Reviews, and reached 55.7 percent in the 14<sup>th</sup> Review, given its heavy focus on governance reform (Figure 5).

**Table 3. Methods of Allocation of Quota Increases**

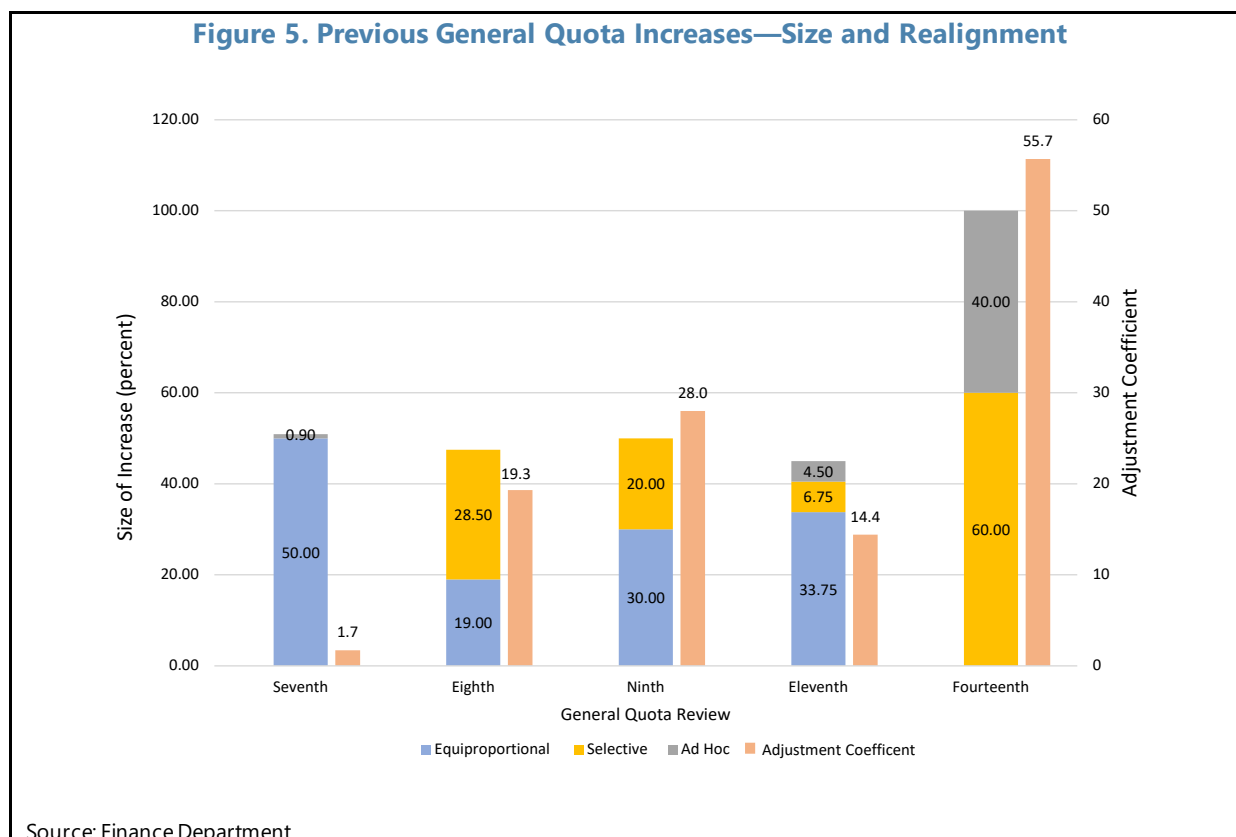
	<b>Equiproportional</b>	<b>Selective</b>	<b>Ad hoc</b>
<b>Eligibility</b>	All members	All members	Subset of members
<b>Mechanism</b>	Increase proportional to current quota shares	Increase proportional to calculated quota shares	Based on agreed criteria (possibly including formula)
<b>Impact</b>	Quota shares are not modified	Resulting quota shares (RQS) are a weighted average of current and calculated quota shares <sup>1/</sup>	Variable (may either provide more rapid realignment to a selected metric or limit certain shifts in quota shares)

1/ The weight of current shares will be 100 percent and the weight of calculated shares will be equal to the percentage point increase in total quotas.

<sup>22</sup> While providing significant flexibility, ad hoc increases have to be carefully designed and calibrated to avoid or minimize “anomalies” in the resulting quota shares, such as reductions in quota shares of under-represented members, or over-represented members becoming under-represented.

<sup>23</sup> For more details, see Box 1, in [Fifteenth General Review of Quotas—Additional Considerations and Data Update \(7/6/18\)](#).

<sup>24</sup> The adjustment coefficient is calculated as the relative reduction in the “root mean-squared deviation” between AQS and CQS across all members; a full realignment toward CQS yields a coefficient of 100 percent. An alternative measure is the relative reduction in aggregate out-of-lineness (OOL, sum of positive deviations between CQS and AQS, or half of the sum of absolute deviations). Both measures tend to yield broadly similar results. For instance, the 2008 Reform resulted in an adjustment coefficient of 25.6 percent and a reduction of 28.9 percent in OOL (from 15.0 to 10.6 percentage points). The 14<sup>th</sup> Review resulted in an adjustment coefficient of 55.7 percent and a reduction of 50.6 percent in OOL (from 10.7 to 5.3 percentage points).



## B. Simulations Results

**17. This section updates a set of illustrative simulations of quota share realignments presented in the 15<sup>th</sup> Review.** The main purpose is to illustrate, for a relatively wide range of overall quota increases, the potential impact that different quota formulas may have on the distribution of members' actual quota shares. As in the discussions on the 15<sup>th</sup> Review, the simulations assume that the quota increase is distributed both based on the formula, i.e., as selective increases, and based on ad hoc increases, e.g., to protect the quota shares of poorest members. No equiproportional increase is assumed (any such increase would tend to dampen the realignments shown in these simulations). The final set of simulations also illustrates the potential impact of providing additional ad hoc increases to recognize members' voluntary financial contributions to the Fund.

**18. More specifically, the simulations include the following elements:**

- **Size of overall increase:** Three purely illustrative scenarios are considered: (i) an increase of 75 percent, (ii) an increase of 100 percent and (iii) an increase of 125 percent.<sup>25</sup> An increase of 75 percent would broadly restore the quota-to-GDP ratio to the level observed in

<sup>25</sup> As of July 1, 2021, the Fund's total resource envelope amounted to about SDR 973 billion, comprising SDR 477 billion from quotas, SDR 361 billion from the NAB (rising to SDR 364 billion including prospective participants), and SDR 135 billion from BBAs (which would rise to SDR 138 billion once all 2020 BBAs become effective). Lending capacity is smaller than total resources as it excludes resources from members that do not participate in the Financial Transactions Plan (FTP) as well as a 20 percent prudential balance. For further details, see IMF Financial Operations, Chapter 2 (2018).

previous general reviews of quotas that resulted in a quota increase.<sup>26</sup> An increase of 100 percent would replicate the increase in the 14<sup>th</sup> Review (the largest quota increase in the past).<sup>27</sup> An increase of 125 percent would allow the Fund to fully replace borrowing with quotas while maintaining the current lending capacity, or involve an increase in the Fund’s lending capacity.

- **Illustrative quota formulas:** Results are shown for three formulas discussed in the previous section, i.e. the current formula, Formula 1.2 and Formula 3.2c.<sup>28</sup> Simulations could be refined in the future depending on Directors’ guidance.
- **Protection of the poorest:** For illustrative purposes, and consistent with the approach used for illustrative simulations under the 15<sup>th</sup> Review, the simulations are based on the updated definition of the poorest members used in the 14<sup>th</sup> Review, namely those countries that are PRGT-eligible and whose annual per capita GNI is below the operational IDA cut-off or below twice that amount for small states. Using the prevailing IDA cut-off of US\$1,185 for the FY2021 (which is based on 2019 GNI data), this generates a list of 29 members eligible for protection (compared with 52 members<sup>29</sup> at the time of the 14<sup>th</sup> Review).<sup>30</sup> As in the 14<sup>th</sup> Review, protection is applied at an individual country level. The “cost of protection” in these illustrative simulations is relatively small in aggregate and ranges from 0.6 to 0.7 percent.<sup>31</sup> Supplement 1, Annex II discusses broader alternative protection lists (e.g., the full list of PRGT-eligible countries and small developing states) that could be considered for illustrative simulations in the future, based on Directors’ further feedback.

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<sup>26</sup> As detailed in the companion paper on *Adequacy of Fund Resources—Initial Considerations* (EB/COQuota/21/1, 7/19/21), the increase in quotas required to restore quotas to the ratios observed in previous general reviews that resulted in a quota increase would range between 67 and 197 percent over the medium-term based on a set of relevant indicators. More specifically, the increase in quotas required to restore the quota to GDP ratio would amount to 67 percent.

<sup>27</sup> For comparison, the average increase of the five previous general quota reviews that resulted in increases was close to 60 percent.

<sup>28</sup> Current Formula –  $(0.50 \cdot \text{GDP} + 0.30 \cdot \text{Openness} + 0.15 \cdot \text{Variability} + 0.05 \cdot \text{Reserves})^{0.95}$ , with 60/40 GDP Blend (MER/PPP). Formula 1.2 –  $(0.60 \cdot \text{GDP} + 0.35 \cdot \text{Openness} + 0.05 \cdot \text{Reserves})^{0.95}$ , with 60/40 GDP Blend (MER/PPP). Formula 3.2.c –  $(0.60 \cdot \text{GDP} + 0.35 \cdot \text{Capped Openness} + 0.05 \cdot \text{Reserves})^{0.95}$ , with 60/40 GDP Blend (MER/PPP), and Openness share cap of 1.8.

<sup>29</sup> In addition to these 52 members, Zimbabwe was included in the group of protected countries, despite not being PRGT-eligible at the time of the 14<sup>th</sup> Review due to arrears. South Sudan joined the Fund after the 14<sup>th</sup> Review but received a treatment consistent with the poorest members in the calculation of its quota (see Republic of South Sudan—Calculation of Quota, EB/CM/South Sudan/11/1 and Resolution No. 66-5).

<sup>30</sup> The updated list of the poorest members based on the 14<sup>th</sup> Review criteria has been shrinking considerably relative to the list of PRGT-eligible countries (currently 69 and 71 at the time of the 14<sup>th</sup> Review). While the former is based on a country’s most recent annual per capita GNI (a single data point) relative to the operational IDA cutoff, the criteria for graduation from the PRGT eligibility are governed by a framework (see Supplement 1, Annex II).

<sup>31</sup> The cost of protection is defined as the share of the total quota increase that is allocated in an ad hoc manner to protect the eligible members in the list of poorest countries against a decline in their quota shares.

- **Voluntary financial contributions (VFCS):** The last set of simulations allocates 5 percent of the overall increase as ad hoc increases to a sub-set of members based on their VFCS to the Fund.<sup>32</sup>

**19. The main findings of these simulations are the following** (see Figure 6, Tables 4–6):

- The increase in quota shares for EMDCs as a group ranges from 3.4 to 4.8 pp, mostly depending on the size of the overall increase, and is only moderately affected by the formula used. When voluntary financial contributions are introduced, the shift declines to the 2.8 to 4.0 pp range.
- The distribution of the corresponding decline in the shares of AEs between major and other AEs depends on the formula: for Formula 1.2, major AEs bear around 90 percent of the loss; for Formula 3.2.c, major AEs account for about two-third of the decline (by comparison, major AEs represent 75 percent of current AQS of AEs).
- The aggregate share of LICs declines by 0.1 to 0.2 pp with the protection of the poorest based on the updated 14<sup>th</sup> Review list. Such declines would be avoided by using a broader protection list of PRGT-eligible countries (see Annex II in Supplement 1).
- Aggregate out-of-lineness (based on the respective formula used) is reduced by around 39 to 55 percent. As expected for pre-dominantly selective increases, the reduction is mostly dependent on the size of the overall increase. Simulations with voluntary financial contributions have a slightly lower reduction in out-of-lineness.

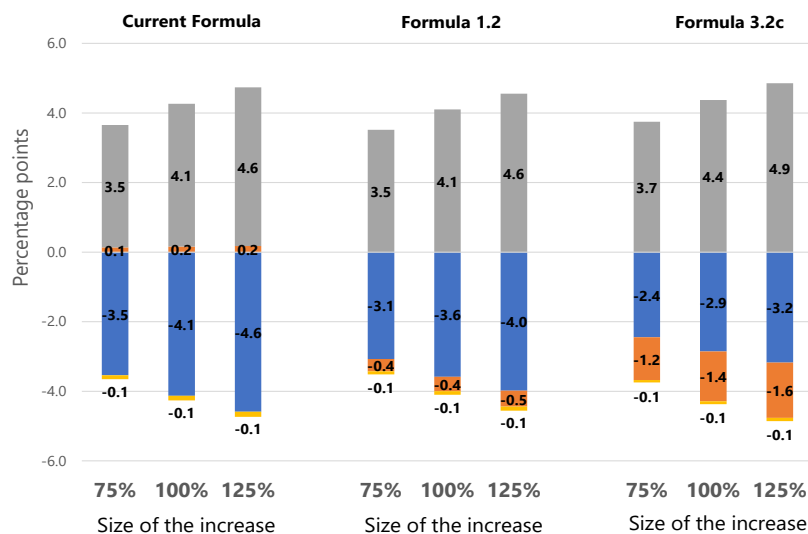
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<sup>32</sup> Supplement 1, Annex III updates staff's earlier work on possible composite measures of voluntary financial contributions. The version used here is VFCS II, which aggregates each member's share across four types of contributions, with weights of 0.3 for the NAB, 0.3 for 2020 bilateral borrowing agreements, 0.2 for PRGT loans and concessional financing subsidies combined, and 0.2 for capacity development.

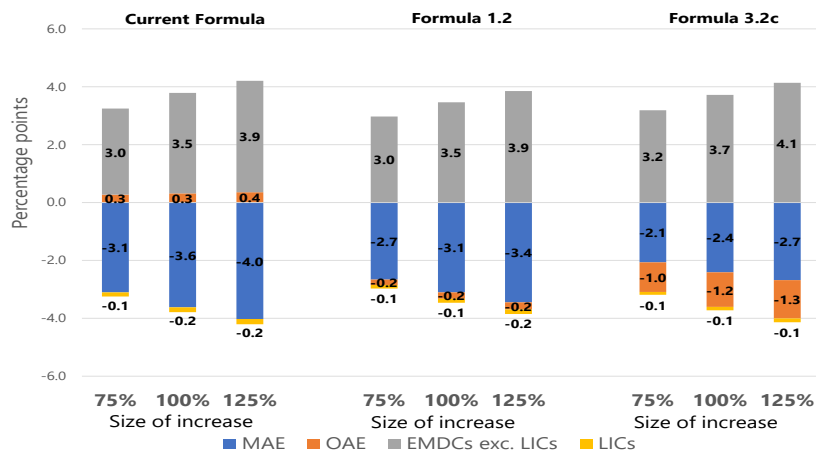
**Figure 6. Updated Simulations—Summary Results<sup>1/</sup>**

(Changes in Quota Shares, in percentage points)

**A. Selective Increase with Protection of the Poorest<sup>2/</sup>**



**B. Selective Increase with Protection of the Poorest and a Measure of Voluntary Financial Contributions<sup>2/</sup>**



Source: Finance Department.

1/ MAEs: Major Advanced Economies, OAEs: Other Advanced Economies, EMDCs: Emerging Market and Developing Economies, LICs: Low-Income Countries.

2/ All simulations are based on increases proportional to the calculated quota shares (selective increases) plus ad hoc increases to protect the shares of the poorest members. The ad hoc element based on VFCS II allocates 5 percent of the overall increase to a sub-set of members based on their voluntary financial contributions to the Fund. VFCS II is a weighted average of voluntary financial contribution shares, with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined and 0.2 for capacity development.

**Table 4. Updated Simulations—Summary Results**  
(in percentage points, unless otherwise indicated)

Selective Increase with Protection of the Poorest <sup>1/</sup>	Current Formula			Formula 1.2 <sup>2/</sup>			Formula 3.2.c <sup>3/</sup>		
	75%	100%	125%	75%	100%	125%	75%	100%	125%
<b>Changes in quota shares</b>									
Major Advanced Economies	-3.5	-4.1	-4.6	-3.1	-3.6	-4.0	-2.4	-2.9	-3.2
Other Advanced Economies	0.1	0.2	0.2	-0.4	-0.4	-0.5	-1.2	-1.4	-1.6
Emerging Market and Developing Countries	3.4	4.0	4.4	3.4	4.0	4.4	3.7	4.3	4.8
of which: Low Income Countries	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
<b>Overall quota shares realignment</b>									
Initial Aggregate Out-of-lininess	14.1	14.1	14.1	14.0	14.0	14.0	13.4	13.4	13.4
Final Aggregate Out-of-lininess	8.2	7.2	6.4	8.1	7.1	6.4	7.8	6.8	6.1
Reduction in Out of-lininess (percent)	42%	49%	55%	42%	49%	55%	42%	49%	55%
<b>Selective Increase with Protection of the Poorest and Ad Hoc Based on VFCS II (5 percent of total increase) <sup>4/</sup></b>									
Selective Increase with Protection of the Poorest and Ad Hoc Based on VFCS II (5 percent of total increase) <sup>4/</sup>	Current Formula			Formula 1.2 <sup>2/</sup>			Formula 3.2.c <sup>3/</sup>		
	75%	100%	125%	75%	100%	125%	75%	100%	125%
<b>Changes in quota shares</b>									
Major Advanced Economies	-3.1	-3.6	-4.0	-2.7	-3.1	-3.4	-2.1	-2.4	-2.7
Other Advanced Economies	0.3	0.3	0.4	-0.2	-0.2	-0.2	-1.0	-1.2	-1.3
Emerging Market and Developing Countries	2.8	3.3	3.7	2.9	3.3	3.7	3.1	3.6	4.0
of which: Low Income Countries	-0.1	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1
<b>Overall quota shares realignment</b>									
Initial Aggregate Out-of-lininess	14.1	14.1	14.1	14.0	14.0	14.0	13.4	13.4	13.4
Final Aggregate Out-of-lininess	8.6	7.7	6.9	8.5	7.6	6.9	8.2	7.4	6.7
Reduction in Out of-lininess (percent)	39%	46%	51%	39%	46%	51%	39%	45%	50%

Source: Finance Department.

1/ All simulations are based on increases proportional to the calculated quota shares (selective increases) plus ad hoc increases to protect the shares of the poorest members.

2/ Formula 1.2 –  $(0.60 \cdot \text{GDP} + 0.35 \cdot \text{Openness} + 0.05 \cdot \text{Reserves})^{0.95}$ , with 60/40 GDP Blend (MER/PPP).

3/ Formula 3.2.c –  $(0.60 \cdot \text{GDP} + 0.35 \cdot \text{Capped Openness} + 0.05 \cdot \text{Reserves})^{0.95}$ , with 60/40 GDP Blend (MER/PPP).

4/ The selective increase with protection of the poorest and Ad Hoc increase based on VFCS II. The Ad Hoc increase allocates 5 percent of the overall increase to a sub-set of members based on their voluntary financial contributions to the Fund. VFCS II is a weighted average of voluntary financial contribution shares, with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined and 0.2 for capacity development.

**Table 5. Updated Simulations—Selective Increase with Protection of the Poorest<sup>1/</sup>**  
(in percent)

	14 <sup>th</sup> Review	Current Formula	Overall Increase			Formula 1.2	Overall Increase			Formula 3.2.c	Overall Increase		
			75%	100%	125%		75%	100%	125%		75%	100%	125%
<b>Advanced economies</b>	<b>57.6</b>	<b>50.0</b>	<b>54.2</b>	<b>53.7</b>	<b>53.2</b>	<b>50.0</b>	<b>54.2</b>	<b>53.7</b>	<b>53.2</b>	<b>49.4</b>	<b>54.0</b>	<b>53.4</b>	<b>52.9</b>
<b>Major advanced economies</b>	<b>43.4</b>	<b>35.3</b>	<b>39.8</b>	<b>39.2</b>	<b>38.8</b>	<b>36.4</b>	<b>40.3</b>	<b>39.8</b>	<b>39.4</b>	<b>37.9</b>	<b>40.9</b>	<b>40.5</b>	<b>40.2</b>
United States	17.4	14.9	16.3	16.1	16.0	16.0	16.7	16.6	16.5	16.5	17.0	16.9	16.9
Japan	6.5	4.9	5.8	5.7	5.6	4.9	5.8	5.7	5.6	5.1	5.9	5.8	5.7
Germany	5.6	4.8	5.3	5.2	5.2	4.9	5.3	5.2	5.2	5.0	5.3	5.3	5.2
France	4.2	3.1	3.7	3.6	3.6	3.1	3.7	3.7	3.6	3.3	3.8	3.8	3.7
United Kingdom	4.2	3.4	3.8	3.8	3.7	3.3	3.8	3.8	3.7	3.5	3.9	3.8	3.8
Italy	3.2	2.3	2.8	2.7	2.7	2.3	2.8	2.7	2.7	2.4	2.8	2.8	2.7
Canada	2.3	1.9	2.1	2.1	2.1	2.0	2.2	2.1	2.1	2.1	2.2	2.2	2.2
<b>Other advanced economies</b>	<b>14.3</b>	<b>14.7</b>	<b>14.4</b>	<b>14.5</b>	<b>14.5</b>	<b>13.6</b>	<b>13.9</b>	<b>13.9</b>	<b>13.8</b>	<b>11.5</b>	<b>13.1</b>	<b>12.9</b>	<b>12.7</b>
Spain	2.0	1.7	1.9	1.9	1.8	1.7	1.9	1.8	1.8	1.8	1.9	1.9	1.9
Netherlands	1.8	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.2	1.6	1.5	1.5
Australia	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Belgium	1.3	1.1	1.2	1.2	1.2	1.0	1.2	1.2	1.2	0.8	1.1	1.0	1.0
Switzerland	1.2	1.9	1.5	1.5	1.6	1.6	1.4	1.4	1.4	1.3	1.2	1.2	1.2
Sweden	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.8	0.8	0.9	0.8	0.8
Austria	0.8	0.7	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.7
Norway	0.8	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7
Ireland	0.7	1.0	0.8	0.9	0.9	1.0	0.8	0.8	0.9	0.5	0.6	0.6	0.6
Denmark	0.7	0.6	0.7	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.6
<b>EMDCs 2/</b>	<b>42.4</b>	<b>50.0</b>	<b>45.8</b>	<b>46.3</b>	<b>46.8</b>	<b>50.0</b>	<b>45.8</b>	<b>46.3</b>	<b>46.8</b>	<b>50.6</b>	<b>46.0</b>	<b>46.6</b>	<b>47.1</b>
<b>Africa</b>	<b>4.4</b>	<b>3.4</b>	<b>4.2</b>	<b>4.2</b>	<b>4.1</b>	<b>3.3</b>	<b>4.2</b>	<b>4.1</b>	<b>4.1</b>	<b>3.4</b>	<b>4.2</b>	<b>4.2</b>	<b>4.1</b>
South Africa	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.6
Nigeria	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5
<b>Asia</b>	<b>16.0</b>	<b>26.2</b>	<b>20.3</b>	<b>21.1</b>	<b>21.6</b>	<b>27.2</b>	<b>20.8</b>	<b>21.5</b>	<b>22.2</b>	<b>27.4</b>	<b>20.9</b>	<b>21.7</b>	<b>22.3</b>
China 3/	6.4	13.7	9.5	10.0	10.4	14.2	9.7	10.2	10.7	14.7	9.9	10.5	10.9
India	2.7	3.4	3.0	3.1	3.1	3.8	3.2	3.2	3.3	3.8	3.2	3.3	3.3
Korea	1.8	2.1	1.9	1.9	1.9	2.2	2.0	2.0	2.0	2.3	2.0	2.0	2.1
Indonesia	1.0	1.3	1.1	1.1	1.2	1.4	1.2	1.2	1.2	1.5	1.2	1.2	1.2
Singapore	0.8	1.4	1.1	1.1	1.1	1.3	1.0	1.1	1.1	0.7	0.8	0.8	0.8
Malaysia	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
Thailand	0.7	1.0	0.8	0.8	0.9	1.0	0.8	0.8	0.8	1.0	0.8	0.9	0.9
<b>Middle East, Malta and Turkey</b>	<b>6.7</b>	<b>6.6</b>	<b>6.7</b>	<b>6.7</b>	<b>6.7</b>	<b>6.1</b>	<b>6.5</b>	<b>6.4</b>	<b>6.4</b>	<b>6.0</b>	<b>6.4</b>	<b>6.4</b>	<b>6.3</b>
Saudi Arabia	2.1	1.5	1.8	1.8	1.7	1.3	1.7	1.7	1.6	1.3	1.8	1.7	1.6
Turkey	1.0	1.2	1.1	1.1	1.1	1.2	1.1	1.1	1.1	1.2	1.1	1.1	1.1
Iran, I.R. of	0.7	0.5	0.7	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.7	0.7	0.7
<b>Western Hemisphere</b>	<b>7.9</b>	<b>6.7</b>	<b>7.4</b>	<b>7.3</b>	<b>7.2</b>	<b>6.8</b>	<b>7.4</b>	<b>7.3</b>	<b>7.2</b>	<b>7.0</b>	<b>7.5</b>	<b>7.4</b>	<b>7.4</b>
Brazil	2.3	1.9	2.1	2.1	2.1	2.0	2.2	2.1	2.1	2.0	2.2	2.2	2.2
Mexico	1.9	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8
Venezuela, R.B. de	0.8	0.2	0.5	0.5	0.5	0.2	0.5	0.5	0.4	0.2	0.5	0.5	0.4
Argentina	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6
<b>Transition economies</b>	<b>7.2</b>	<b>7.1</b>	<b>7.1</b>	<b>7.1</b>	<b>7.1</b>	<b>6.7</b>	<b>7.0</b>	<b>7.0</b>	<b>6.9</b>	<b>6.8</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>
Russia	2.7	2.2	2.5	2.4	2.4	2.2	2.5	2.5	2.4	2.3	2.5	2.5	2.5
Poland	0.9	1.0	0.9	0.9	0.9	1.0	0.9	0.9	0.9	1.0	0.9	0.9	0.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Memorandum Items:</b>													
EU-27	26.1	23.4	24.9	24.7	24.5	22.6	24.6	24.3	24.1	21.1	23.9	23.6	23.3
LICs 4/	3.3	2.4	3.2	3.1	3.1	2.4	3.2	3.2	3.2	2.5	3.2	3.2	3.2
Updated 14 <sup>th</sup> Review Poorest 5/	1.4	0.9	1.4	1.5	1.5	0.9	1.5	1.5	1.5	0.9	1.5	1.5	1.5
PRGT-eligible + Small Developing 6/	3.6	2.7	3.4	3.4	3.4	2.6	3.4	3.4	3.4	2.7	3.5	3.4	3.4

Source: Finance Department.

1/ All simulations are based on increases proportional to the calculated quota shares (selective increases) plus ad hoc increases to protect the shares of the poorest members.

2/ Including Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia.

3/ Including China, P.R., Hong Kong SAR, and Macao SAR.

4/ Currently PRGT-eligible countries (69 members).

5/ Updated 14<sup>th</sup> Review list includes countries that are PRGT-eligible and meet the FY 2021 IDA per capita GNI cut-off of US\$1,185 (data through 2019) and twice that amount for small states, as defined by the IMF. Currently it includes 29 member countries.

6/ PRGT-eligible plus small developing states (84 members).

**Table 6. Updated Simulations—Selective Increase with Protection of the Poorest and a Measure of Voluntary Financial Contributions (5 percent of total increase)<sup>1/</sup>**  
(in percent)

	14 <sup>th</sup> Review	Current Formula	Overall Increase			Formula 1.2	Overall Increase			Formula 3.2.c	Overall Increase		
			75%	100%	125%		75%	100%	125%		75%	100%	125%
<b>Advanced economies</b>	<b>57.6</b>	<b>50.0</b>	<b>54.8</b>	<b>54.3</b>	<b>54.0</b>	<b>50.0</b>	<b>54.8</b>	<b>54.3</b>	<b>54.0</b>	<b>49.4</b>	<b>54.6</b>	<b>54.0</b>	<b>53.6</b>
<b>Major advanced economies</b>	<b>43.4</b>	<b>35.3</b>	<b>40.3</b>	<b>39.7</b>	<b>39.3</b>	<b>36.4</b>	<b>40.7</b>	<b>40.3</b>	<b>39.9</b>	<b>37.9</b>	<b>41.3</b>	<b>40.9</b>	<b>40.7</b>
United States	17.4	14.9	16.1	15.9	15.7	16.0	16.5	16.4	16.2	16.5	16.7	16.6	16.5
Japan	6.5	4.9	6.1	6.1	6.0	4.9	6.1	6.1	6.0	5.1	6.2	6.2	6.1
Germany	5.6	4.8	5.3	5.3	5.3	4.9	5.3	5.3	5.3	5.0	5.4	5.4	5.3
France	4.2	3.1	3.8	3.7	3.7	3.1	3.8	3.8	3.7	3.3	3.9	3.9	3.8
United Kingdom	4.2	3.4	3.9	3.9	3.8	3.3	3.9	3.8	3.8	3.5	4.0	3.9	3.9
Italy	3.2	2.3	2.8	2.8	2.7	2.3	2.8	2.8	2.7	2.4	2.9	2.8	2.8
Canada	2.3	1.9	2.2	2.2	2.1	2.0	2.2	2.2	2.2	2.1	2.2	2.2	2.2
<b>Other advanced economies</b>	<b>14.3</b>	<b>14.7</b>	<b>14.6</b>	<b>14.6</b>	<b>14.6</b>	<b>13.6</b>	<b>14.1</b>	<b>14.1</b>	<b>14.0</b>	<b>11.5</b>	<b>13.3</b>	<b>13.1</b>	<b>13.0</b>
Spain	2.0	1.7	1.9	1.9	1.9	1.7	1.9	1.9	1.9	1.8	1.9	1.9	1.9
Netherlands	1.8	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.2	1.6	1.6	1.6
Australia	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Belgium	1.3	1.1	1.3	1.3	1.2	1.0	1.2	1.2	1.2	0.8	1.1	1.1	1.1
Switzerland	1.2	1.9	1.5	1.6	1.6	1.6	1.4	1.5	1.5	1.3	1.3	1.3	1.3
Sweden	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.8	0.9	0.9	0.9
Austria	0.8	0.7	0.8	0.8	0.8	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.7
Norway	0.8	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7
Ireland	0.7	1.0	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.5	0.6	0.6	0.6
Denmark	0.7	0.6	0.7	0.7	0.6	0.5	0.7	0.6	0.6	0.5	0.6	0.6	0.6
<b>EMDCs 2/</b>	<b>42.4</b>	<b>50.0</b>	<b>45.2</b>	<b>45.7</b>	<b>46.0</b>	<b>50.0</b>	<b>45.2</b>	<b>45.7</b>	<b>46.0</b>	<b>50.6</b>	<b>45.4</b>	<b>46.0</b>	<b>46.4</b>
<b>Africa</b>	<b>4.4</b>	<b>3.4</b>	<b>4.2</b>	<b>4.1</b>	<b>4.1</b>	<b>3.3</b>	<b>4.1</b>	<b>4.1</b>	<b>4.0</b>	<b>3.4</b>	<b>4.2</b>	<b>4.1</b>	<b>4.1</b>
South Africa	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.6
Nigeria	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5
<b>Asia</b>	<b>16.0</b>	<b>26.2</b>	<b>20.0</b>	<b>20.7</b>	<b>21.2</b>	<b>27.2</b>	<b>20.4</b>	<b>21.2</b>	<b>21.7</b>	<b>27.4</b>	<b>20.5</b>	<b>21.3</b>	<b>21.9</b>
China 3/	6.4	13.7	9.4	9.9	10.2	14.2	9.5	10.1	10.5	14.7	9.7	10.3	10.7
India	2.7	3.4	3.0	3.0	3.0	3.8	3.1	3.2	3.2	3.8	3.2	3.2	3.3
Korea	1.8	2.1	1.9	1.9	2.0	2.2	2.0	2.0	2.0	2.3	2.0	2.0	2.1
Indonesia	1.0	1.3	1.1	1.1	1.1	1.4	1.1	1.2	1.2	1.5	1.1	1.2	1.2
Singapore	0.8	1.4	1.0	1.1	1.1	1.3	1.0	1.0	1.1	0.7	0.8	0.8	0.7
Malaysia	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Thailand	0.7	1.0	0.8	0.8	0.8	1.0	0.8	0.8	0.8	1.0	0.8	0.8	0.9
<b>Middle East, Malta and Turkey</b>	<b>6.7</b>	<b>6.6</b>	<b>6.6</b>	<b>6.6</b>	<b>6.6</b>	<b>6.1</b>	<b>6.4</b>	<b>6.4</b>	<b>6.3</b>	<b>6.0</b>	<b>6.4</b>	<b>6.3</b>	<b>6.3</b>
Saudi Arabia	2.1	1.5	1.8	1.8	1.8	1.3	1.8	1.7	1.6	1.3	1.8	1.7	1.7
Turkey	1.0	1.2	1.0	1.1	1.1	1.2	1.0	1.1	1.1	1.2	1.1	1.1	1.1
Iran, I.R. of	0.7	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.6	0.6
<b>Western Hemisphere</b>	<b>7.9</b>	<b>6.7</b>	<b>7.3</b>	<b>7.2</b>	<b>7.1</b>	<b>6.8</b>	<b>7.3</b>	<b>7.2</b>	<b>7.2</b>	<b>7.0</b>	<b>7.4</b>	<b>7.3</b>	<b>7.3</b>
Brazil	2.3	1.9	2.1	2.1	2.1	2.0	2.2	2.1	2.1	2.0	2.2	2.2	2.1
Mexico	1.9	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Venezuela, R.B. de	0.8	0.2	0.5	0.5	0.5	0.2	0.5	0.5	0.4	0.2	0.5	0.5	0.4
Argentina	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
<b>Transition economies</b>	<b>7.2</b>	<b>7.1</b>	<b>7.1</b>	<b>7.0</b>	<b>7.0</b>	<b>6.7</b>	<b>6.9</b>	<b>6.9</b>	<b>6.8</b>	<b>6.8</b>	<b>6.9</b>	<b>6.9</b>	<b>6.9</b>
Russia	2.7	2.2	2.5	2.4	2.4	2.2	2.5	2.4	2.4	2.3	2.5	2.5	2.5
Poland	0.9	1.0	0.9	0.9	0.9	1.0	0.9	0.9	0.9	1.0	0.9	0.9	0.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Memorandum Items:</b>													
EU-27	26.1	23.4	25.1	25.0	24.8	22.6	24.8	24.6	24.4	21.1	24.2	23.9	23.7
LICs 4/	3.3	2.4	3.1	3.1	3.1	2.4	3.1	3.1	3.1	2.5	3.2	3.2	3.1
Updated 14 <sup>th</sup> Review Poorest 5/	1.4	0.9	1.4	1.4	1.4	0.9	1.4	1.5	1.5	0.9	1.4	1.5	1.5
PRGT-eligible + Small Developing 6/	3.6	2.7	3.4	3.4	3.4	2.6	3.4	3.4	3.4	2.7	3.4	3.4	3.4

Source: Finance Department.

1/ All simulations are based on increases proportional to the calculated quota shares (selective increases) plus ad hoc increases to protect the shares of the poorest members and with 5 percent of the overall increase allocated as ad hoc increases based on voluntary financial contributions (VFCS II). VFCS II is the weighted average of contribution shares, with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined, and 0.2 for capacity development. See Supplement 1, Annex II for details.

2/ Including Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia.

3/ Including China, P.R., Hong Kong SAR, and Macao SAR.

4/ Currently PRGT-eligible countries (69 members).

5/ Updated 14<sup>th</sup> Review list includes countries that are PRGT-eligible and meet the FY 2021 IDA per capita GNI cut-off of US\$1,185 (data through 2019) and twice that amount for small states, as defined by the IMF. Currently it includes 29 member countries.

6/ PRGT-eligible plus small developing states (84 members).

## C. Possible Additional Elements

**20. Staff has updated previous work on possible additional elements outside the quota formula that could help build broad support.** In discussions on the 15<sup>th</sup> Review, views on the formula diverged and staff explored possible approaches that could involve a combination of a limited further reform of the formula in areas where there is broad support for change, and additional elements outside of the formula to help build consensus. The remainder of this section updates some of the previous work on such options, including on additional elements linked to GDP and alternative definitions of the poorest members as well as on limits for the dilution of shares.

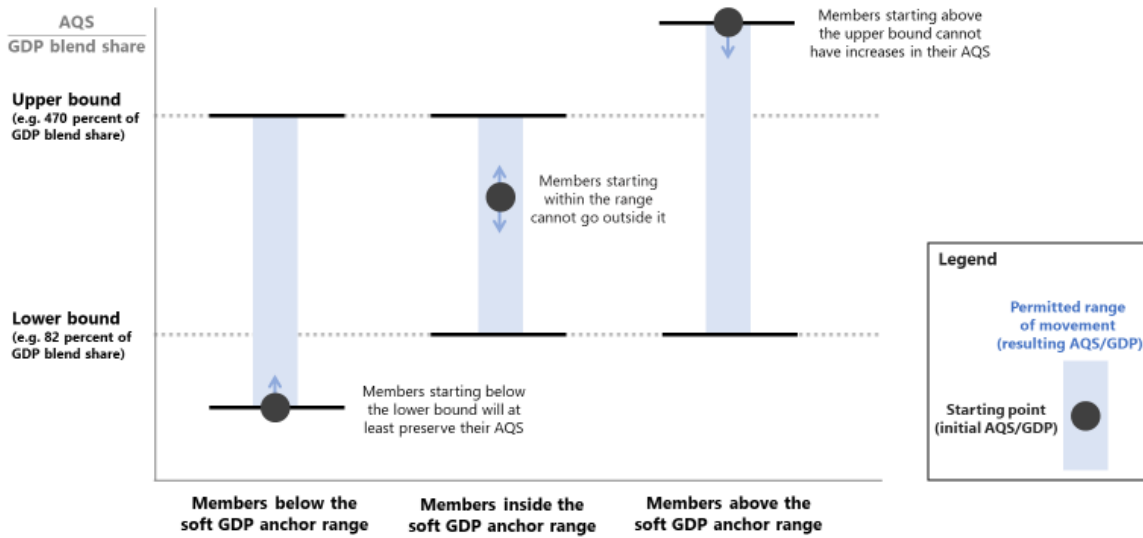
### Possible Additional Role for GDP and Alternative Definitions for Protecting the Poorest

**21. Staff has updated simulations based on the “soft GDP anchor” approach, which could provide an additional role to GDP in a limited number of circumstances.** In this approach, the formula-based distribution (i.e., selective increase) would be the principal allocation tool for a quota increase. The “soft anchor” would apply only in those cases where the formula-based allocation would otherwise *widen* a deviation relative to the GDP blend share where such a deviation is already relatively large and exceeds certain thresholds (Figure 7).

- If a member’s quota share as a result of a formula-based allocation were to rise above the upper bound or fall below the lower bound (both defined as percentages of its GDP blend share), these shifts would be constrained at the upper or lower bound.
- Members whose shares are already outside of one of these thresholds would be constrained from moving further away from the threshold, but they would not be adjusted toward the anchor range beyond what is indicated by the formula-based allocation.
- A judgement would be needed on where to set the appropriate AQS/GDP blend thresholds. Following the same approach as in the discussions on the 15<sup>th</sup> Review, the illustrative thresholds shown here use the 10<sup>th</sup> and 90<sup>th</sup> percentiles of the current AQS/GDP blend distribution as an illustration (Figure 8). Based on the current data update, they correspond to a range of 82 to 470 percent of the AQS/GDP blend share.<sup>33</sup>

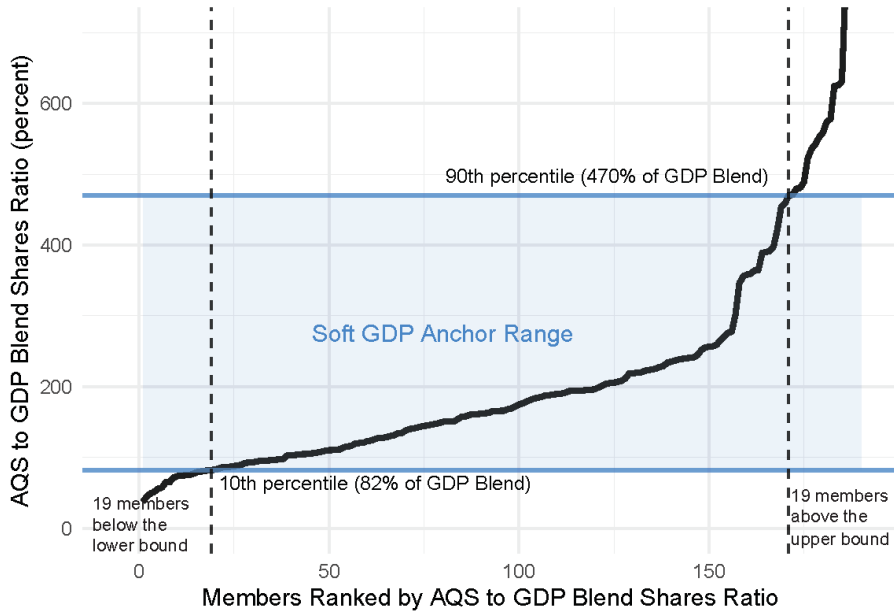
<sup>33</sup> In the 15<sup>th</sup> Review, the illustrative thresholds based on the 10<sup>th</sup> and 90<sup>th</sup> percentiles of the AQS/GDP blend distribution corresponded to a range of 85 to 415 percent of share of AQS/GDP blend (EB/CQuota/18/2).

**Figure 7. Soft GDP Anchor—Conceptual Illustration**



Source: Finance Department.

**Figure 8. Soft GDP Anchor—Illustrative Thresholds**



Source: Finance Department.

**22. Alternative definitions of the poorest are also explored in the illustrative allocations.**

These include the updated list of those protected under the 14<sup>th</sup> Review—covering all PRGT eligible countries with income below the IDA cutoff—as well as all PRGT eligible countries plus small developing states (for details and additional definitions of the poorest, see Supplement 1, Annex II). In terms of the potential “cost of protection”, alternative definitions would have different, but in aggregate relatively small implications, with the highest cost (ranging from 1.3 to 1.4 percent) in case of the full list of PRGT-eligible countries and small developing states (84 members). The impact on the quota share of an individual member country, however, can be large depending on whether a member would be protected or not.

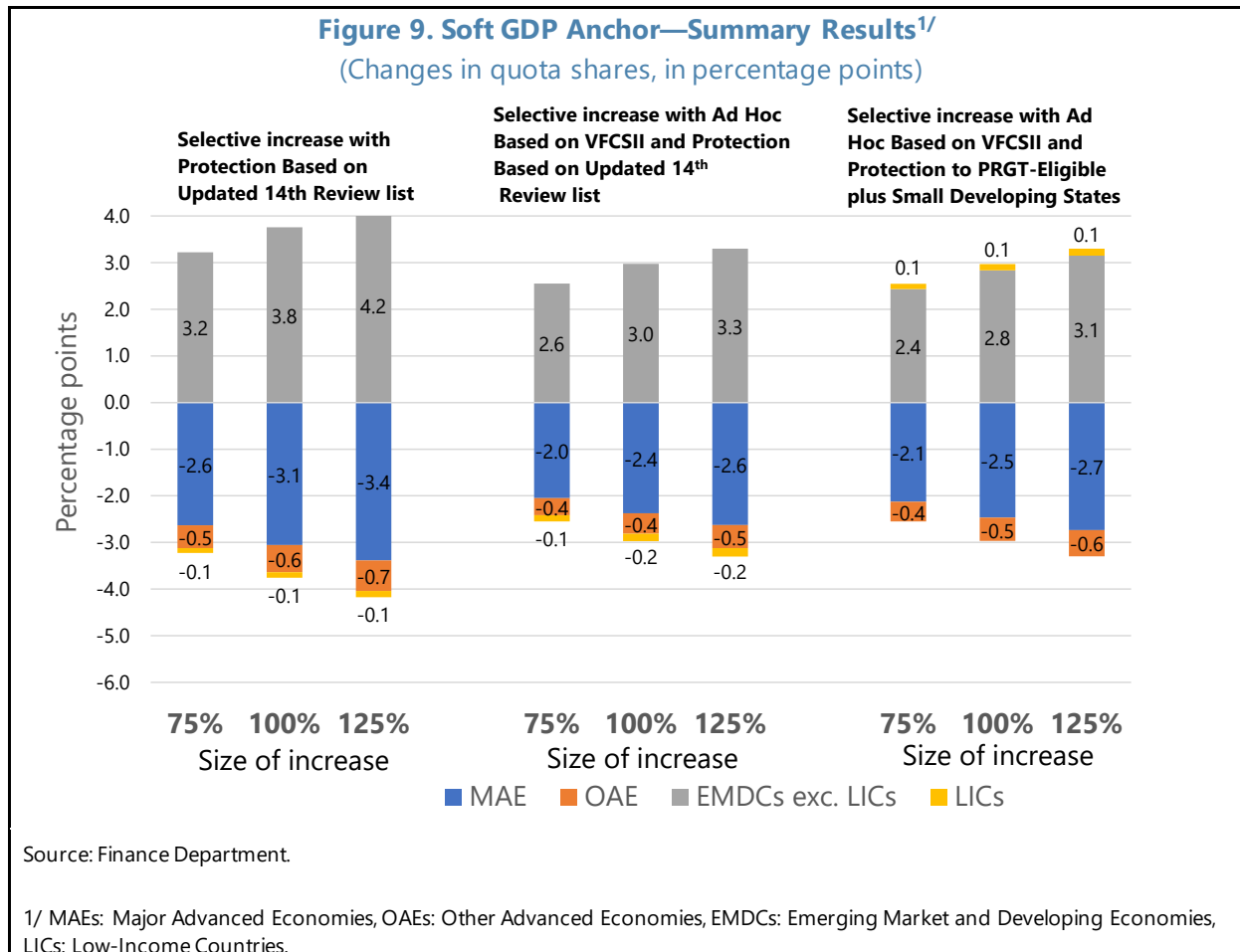
**23. Illustrative allocations of the approach using the soft GDP anchor and alternative definitions of the poorest are summarized in Figures 9–10 and Tables 7–8.**

Following the approach used in the discussions on the 15<sup>th</sup> Review, these allocations are shown using Formula 1.2, which drops variability and redistributes its weight between the GDP blend (2/3) and Openness (1/3). Three variants are explored, with different protection of the poorest lists and an ad hoc element proportional to a measure of voluntary financial contributions. The main outcomes of these illustrative simulations are:

- At the lower illustrative threshold, the soft GDP anchor would benefit one member (i.e., the United States) relative to the corresponding simulations without the anchor, resulting in a quota share at most 7.0 percent higher.
- At the upper illustrative threshold, the soft GDP anchor would affect one member (i.e., Luxembourg) that is under-represented based on Formula 1.2. The threshold reduces its quota share by up to 22.0 percent, compared to the simulations without the anchor.
- The small number of members affected on each side of the band reflects the fact that most members below or close to the lower threshold are under-represented and tend to gain shares (i.e., they do not need protection from the soft GDP anchor). Conversely, most members above or close to the upper bound are overrepresented and tend to lose shares (i.e., they would not be capped by the soft GDP anchor). Figure 10 illustrates how the anchor affects individual members in the case of a 100 percent selective increase.
- To allow for the adjustments implied by the soft GDP anchor, all other members who are not directly impacted by the anchor would have a reduction in quota shares of at most 1.9 percent, compared to the simulations without the anchor.
- In the selective increase, the aggregate shifts to EMDCs are in the 3.1 to 4.0 pp range (about 0.3 to 0.4 pp lower than simulations without the anchor). When financial contributions are introduced, the shifts are in the 2.4 to 3.3 pp range (about 0.4 to 0.6 pp lower than in simulations without the anchor). Major AEs account for about eighty percent of the shift to EMDCs, slightly larger than their share in the current AQS.

- The resulting reduction in out-of-lineness is in the range of 35 to 51 percent (slightly smaller than in simulations without the anchor) and is, as before, mostly determined by the size of the allocation.
- The aggregate share of LICs declines by 0.1 to 0.2 pp with the protection of the poorest based on the updated 14<sup>th</sup> Review list. It would increase by about 0.1pp with a broader protection list of PRGT-eligible countries and small developing states and an ad hoc increase based on VFCS II (see Annex II in Supplement 1 for more detail on the alternative list of the poorest).

**24. Staff could refine this approach in the future, including by considering different thresholds.** A narrower range for the threshold could increase the impact of the soft GDP anchor. For the sake of illustration, thresholds based on the 20<sup>th</sup> and 80<sup>th</sup> percentiles of the current AQS/GDP blend distribution would constrain a decline in AQS for six countries at the lower bound (i.e., the United States, Brazil, Argentina, Iran, Australia, and Colombia) and restrict an increase in AQS for one country at the upper bound (i.e., Luxembourg). At the same time, a narrower range would reduce potential adjustments in quota shares and as such limit the reduction in out-of-lineness. Staff could further explore this approach in future work, depending on Directors’ guidance.



**Table 7. Soft GDP Anchor—Summary Results<sup>1/</sup>**  
(in percentage points, unless otherwise indicated)

	Selective increase with Protection Based on Updated 14 <sup>th</sup> Review list			Selective increase with Ad Hoc Based on VFCSII and Proection Based on Updated 14 <sup>th</sup> Review list			Selective increase with Ad Hoc Based on VFCSII and Protection to PRGT-Eligible plus Small Developing States		
	75%	100%	125%	75%	100%	125%	75%	100%	125%
<b>Changes in quota shares</b>									
Major Advanced Economies	-2.6	-3.1	-3.4	-2.0	-2.4	-2.6	-2.1	-2.5	-2.7
Other Advanced Economies	-0.5	-0.6	-0.7	-0.4	-0.4	-0.5	-0.4	-0.5	-0.6
Emerging Market and Developing Countries	3.1	3.6	4.0	2.4	2.8	3.1	2.5	3.0	3.3
of which: Low Income Countries	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	0.1	0.1	0.1
<b>Overall quota shares realignment</b>									
Initial Aggregate Out-of-lininess	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Final Aggregate Out-of-lininess	8.4	7.5	6.8	8.9	8.1	7.5	9.1	8.3	7.7
Reduction in Out-of-lininess (percent)	40%	46%	51%	36%	42%	47%	35%	41%	45%
<b>Changes relative to without the Soft GDP Anchor</b>									
Major Advanced Economies	0.4	0.5	0.6	0.6	0.7	0.8	0.6	0.8	0.9
Other Advanced Economies	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3
Emerging Market and Developing Countries	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	-0.5	-0.5	-0.6
of which: Low Income Countries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Finance Department.

1/ Formula 1.2 –  $(0.60 \cdot \text{GDP} + 0.35 \cdot \text{Openness} + 0.05 \cdot \text{Reserves})^{0.95}$ , with 60/40 GDP Blend (MER/PPP). VFCS II is a weighted average of voluntary financial contribution shares, with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined and 0.2 for capacity development. Soft GDP anchor is based on thresholds of 82-470 percent of GDP blend shares.

**Table 8. Soft GDP Anchor and Alternative Protection of the Poorest—Detailed Results<sup>1/</sup>**  
(in percent)

	14 <sup>th</sup> Review	Current Formula	Formula 1.2	GDP Blend	VFCS II	Selective increase with Protection Based on Updated 14th Review list			Selective increase with Ad Hoc Based on VFCSII and Proection Based on Updated 14th Review list			Selective increase with Ad Hoc Based on VFCSII and Proection to PRGT-Eligible plus Small Developing States		
						75%	100%	125%	75%	100%	125%	75%	100%	125%
<b>Advanced economies</b>	<b>57.6</b>	<b>50.0</b>	<b>50.0</b>	<b>49.3</b>	<b>77.0</b>	<b>54.5</b>	<b>54.0</b>	<b>53.6</b>	<b>55.2</b>	<b>54.8</b>	<b>54.5</b>	<b>55.1</b>	<b>54.7</b>	<b>54.3</b>
<b>Major advanced economies</b>	<b>43.4</b>	<b>35.3</b>	<b>36.4</b>	<b>40.4</b>	<b>55.8</b>	<b>40.7</b>	<b>40.3</b>	<b>40.0</b>	<b>41.3</b>	<b>41.0</b>	<b>40.7</b>	<b>41.2</b>	<b>40.9</b>	<b>40.6</b>
United States	17.4	14.9	16.0	21.1	5.1	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3
Japan	6.5	4.9	4.9	5.2	20.8	5.8	5.6	5.6	6.1	6.0	6.0	6.1	6.0	5.9
Germany	5.6	4.8	4.9	4.2	8.2	5.2	5.2	5.1	5.3	5.2	5.2	5.3	5.2	5.2
France	4.2	3.1	3.1	2.9	7.5	3.7	3.6	3.6	3.8	3.7	3.7	3.8	3.7	3.7
United Kingdom	4.2	3.4	3.3	3.0	6.1	3.8	3.7	3.7	3.8	3.8	3.7	3.8	3.8	3.7
Italy	3.2	2.3	2.3	2.3	4.4	2.8	2.7	2.6	2.8	2.7	2.7	2.8	2.7	2.7
Canada	2.3	1.9	2.0	1.8	3.7	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.1
<b>Other advanced economies</b>	<b>14.3</b>	<b>14.7</b>	<b>13.6</b>	<b>8.9</b>	<b>21.1</b>	<b>13.8</b>	<b>13.7</b>	<b>13.6</b>	<b>13.9</b>	<b>13.9</b>	<b>13.8</b>	<b>13.9</b>	<b>13.8</b>	<b>13.7</b>
Spain	2.0	1.7	1.7	1.6	2.6	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8
Netherlands	1.8	2.0	1.9	0.9	3.5	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9
Australia	1.4	1.3	1.4	1.4	1.6	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Belgium	1.3	1.1	1.0	0.6	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Switzerland	1.2	1.9	1.6	0.7	3.9	1.4	1.4	1.4	1.4	1.5	1.5	1.4	1.5	1.5
Sweden	0.9	0.9	0.8	0.6	1.7	0.9	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9
Austria	0.8	0.7	0.7	0.5	0.9	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7
Norway	0.8	0.6	0.6	0.4	1.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Ireland	0.7	1.0	1.0	0.4	0.0	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8
Denmark	0.7	0.6	0.5	0.4	1.2	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.6	0.6
<b>EMDCs 2/</b>	<b>42.4</b>	<b>50.0</b>	<b>50.0</b>	<b>50.7</b>	<b>23.0</b>	<b>45.5</b>	<b>46.0</b>	<b>46.4</b>	<b>44.8</b>	<b>45.2</b>	<b>45.5</b>	<b>44.9</b>	<b>45.3</b>	<b>45.7</b>
<b>Africa</b>	<b>4.4</b>	<b>3.4</b>	<b>3.3</b>	<b>3.1</b>	<b>1.4</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>	<b>4.0</b>	<b>4.3</b>	<b>4.3</b>	<b>4.3</b>
South Africa	0.6	0.5	0.5	0.5	0.2	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.5
Nigeria	0.5	0.6	0.5	0.6	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Asia</b>	<b>16.0</b>	<b>26.2</b>	<b>27.2</b>	<b>29.5</b>	<b>11.9</b>	<b>20.6</b>	<b>21.3</b>	<b>21.9</b>	<b>20.2</b>	<b>20.9</b>	<b>21.4</b>	<b>20.1</b>	<b>20.8</b>	<b>21.3</b>
China 3/	6.4	13.7	14.2	16.9	7.5	9.6	10.1	10.6	9.4	9.9	10.3	9.4	9.9	10.2
India	2.7	3.4	3.8	4.8	1.1	3.1	3.2	3.3	3.1	3.1	3.2	3.1	3.1	3.2
Korea	1.8	2.1	2.2	1.9	2.3	1.9	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0
Indonesia	1.0	1.3	1.4	1.7	0.0	1.2	1.2	1.2	1.1	1.1	1.2	1.1	1.1	1.2
Singapore	0.8	1.4	1.3	0.4	0.4	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Malaysia	0.8	0.7	0.7	0.5	0.1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Thailand	0.7	1.0	1.0	0.8	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
<b>Middle East, Malta and Turkey</b>	<b>6.7</b>	<b>6.6</b>	<b>6.1</b>	<b>5.4</b>	<b>3.6</b>	<b>6.4</b>	<b>6.4</b>	<b>6.3</b>	<b>6.4</b>	<b>6.3</b>	<b>6.2</b>	<b>6.3</b>	<b>6.3</b>	<b>6.2</b>
Saudi Arabia	2.1	1.5	1.3	1.1	2.2	1.7	1.7	1.6	1.7	1.7	1.6	1.7	1.7	1.6
Turkey	1.0	1.2	1.2	1.3	0.3	1.1	1.1	1.1	1.0	1.0	1.1	1.0	1.0	1.0
Iran, I.R. of	0.7	0.5	0.6	0.7	0.0	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6
<b>Western Hemisphere</b>	<b>7.9</b>	<b>6.7</b>	<b>6.8</b>	<b>6.9</b>	<b>3.4</b>	<b>7.4</b>	<b>7.3</b>	<b>7.2</b>	<b>7.3</b>	<b>7.2</b>	<b>7.1</b>	<b>7.3</b>	<b>7.2</b>	<b>7.1</b>
Brazil	2.3	1.9	2.0	2.4	1.7	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Mexico	1.9	1.7	1.8	1.7	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Venezuela, R.B. de	0.8	0.2	0.2	0.2	-	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.4
Argentina	0.7	0.6	0.6	0.7	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
<b>Transition economies</b>	<b>7.2</b>	<b>7.1</b>	<b>6.7</b>	<b>5.8</b>	<b>2.7</b>	<b>7.0</b>	<b>6.9</b>	<b>6.9</b>	<b>6.9</b>	<b>6.8</b>	<b>6.8</b>	<b>6.8</b>	<b>6.8</b>	<b>6.7</b>
Russia	2.7	2.2	2.2	2.4	1.4	2.5	2.5	2.4	2.5	2.4	2.4	2.5	2.4	2.4
Poland	0.9	1.0	1.0	0.8	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Memorandum Items:</b>														
EU-27	26.1	23.4	22.6	17.3	34.7	24.4	24.1	23.8	24.6	24.3	24.1	24.5	24.2	24.0
LICs 4/	3.3	2.4	2.4	2.3	0.6	3.2	3.2	3.1	3.1	3.1	3.1	3.4	3.4	3.4
Updated 14th Review Poorest 5/	1.4	0.9	0.9	0.8	0.2	1.4	1.5	1.5	1.4	1.5	1.5	1.4	1.4	1.5
PRGT-eligible + Small Developing 6/	3.6	2.7	2.6	2.4	0.9	3.4	3.4	3.4	3.4	3.4	3.3	3.7	3.7	3.7

Source: Finance Department.

1/ Simulations are based on selective increases (Formula 1.2) plus ad hoc increases where needed to protect the shares of the poorest members, under the constraints of a soft GDP anchor of 82-470 percent of GDP blend shares. Where indicated, 5 percent of the overall increase is allocated as ad hoc increases based on voluntary financial contributions (VFCS II).

2/ Including Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia.

3/ Including China, P.R., Hong Kong SAR, and Macao SAR.

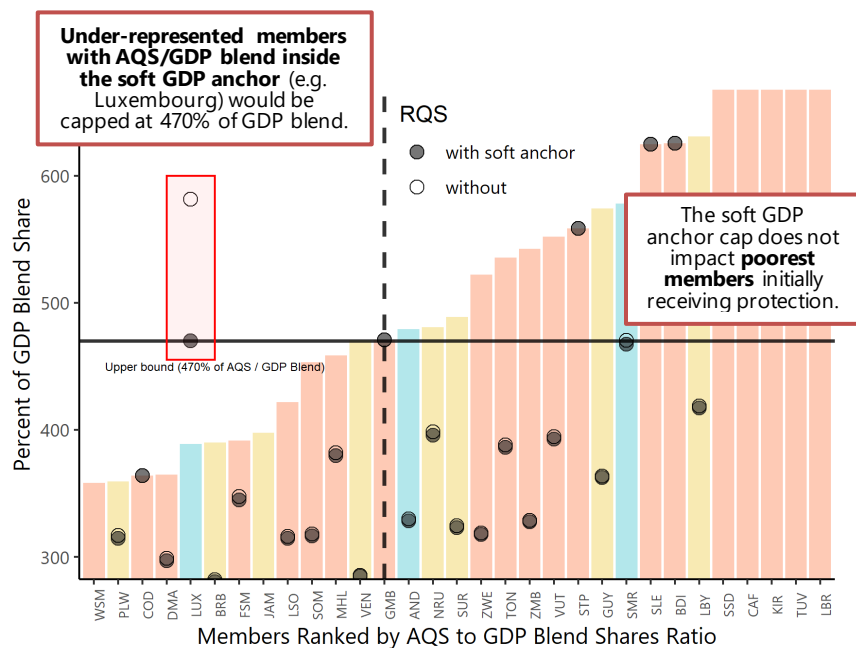
4/ Currently PRGT-eligible countries (69 members).

5/ Updated 14<sup>th</sup> Review list includes countries that are PRGT-eligible and meet the FY 2021 IDA per capita GNI cut-off of US\$1,185 (data through 2019) and twice that amount for small states, as defined by the IMF. Currently, it includes 29 member countries.

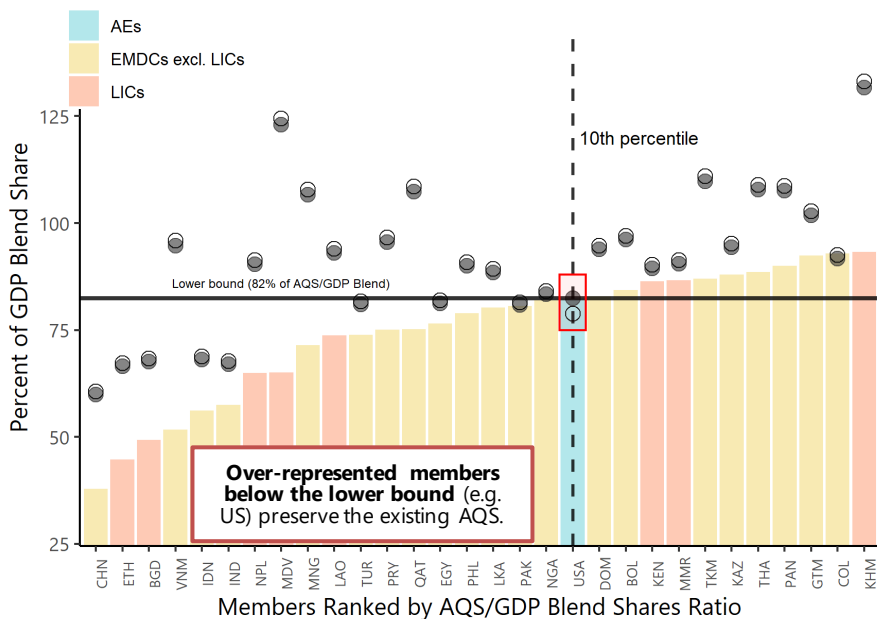
6/ PRGT-eligible plus small developing states (84 members).

**Figure 10. Soft GDP Anchor—Summary Results with a 100 percent Increase<sup>1/</sup>**  
 (In percent of GDP blend shares)

**A. Members near the Upper Bound<sup>2/</sup>**



**B. Members near the Lower Bound**



Source: Finance Department.

1/ RQS: Resulting Quota Shares. Charts illustrate a selective increase based on Formula 1.2 plus ad hoc increases to protect the shares of the poorest members (updated 14<sup>th</sup> Review list). The figures show the top and bottom 30 countries of the distribution. The bars show the initial AQS/GDP Blend ratios and the solid/hollow dots the resulting AQS/Blend ratios with and without the soft GDP anchor.

2/ In Panel A, the following five countries have their AQS and RQS to GDP blend ratios truncated for clarity: South Sudan (772 percent), Central African Republic (785 percent), Kiribati (1,100 percent), Tuvalu (1,116 percent), and Liberia (1,177 percent).

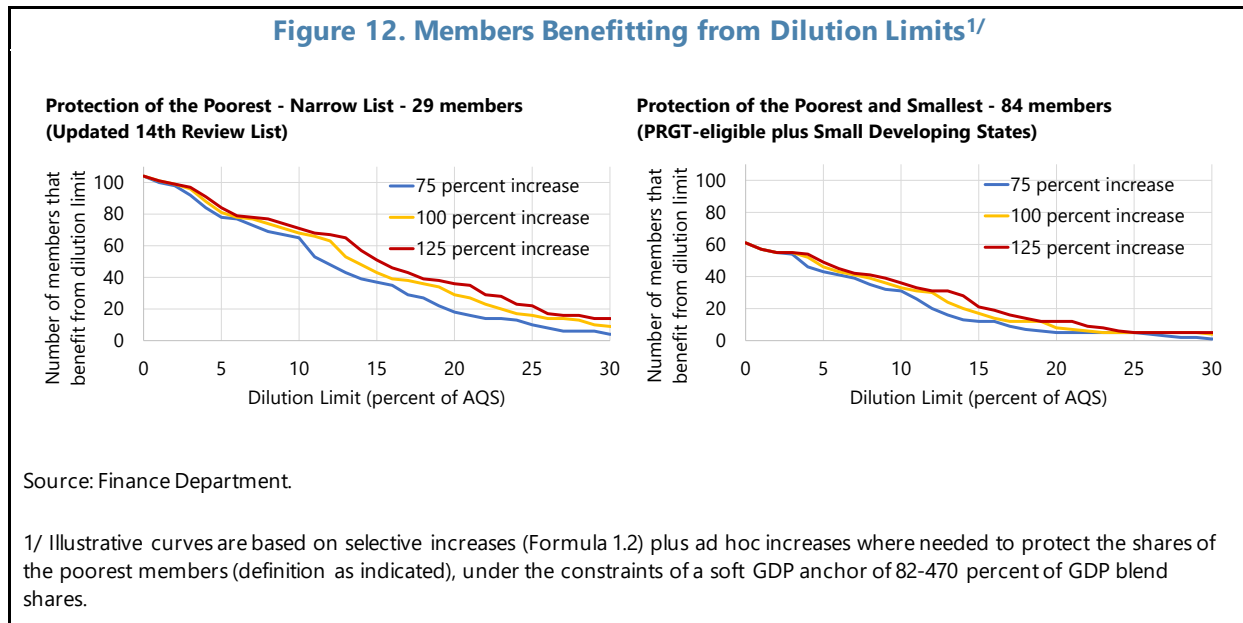
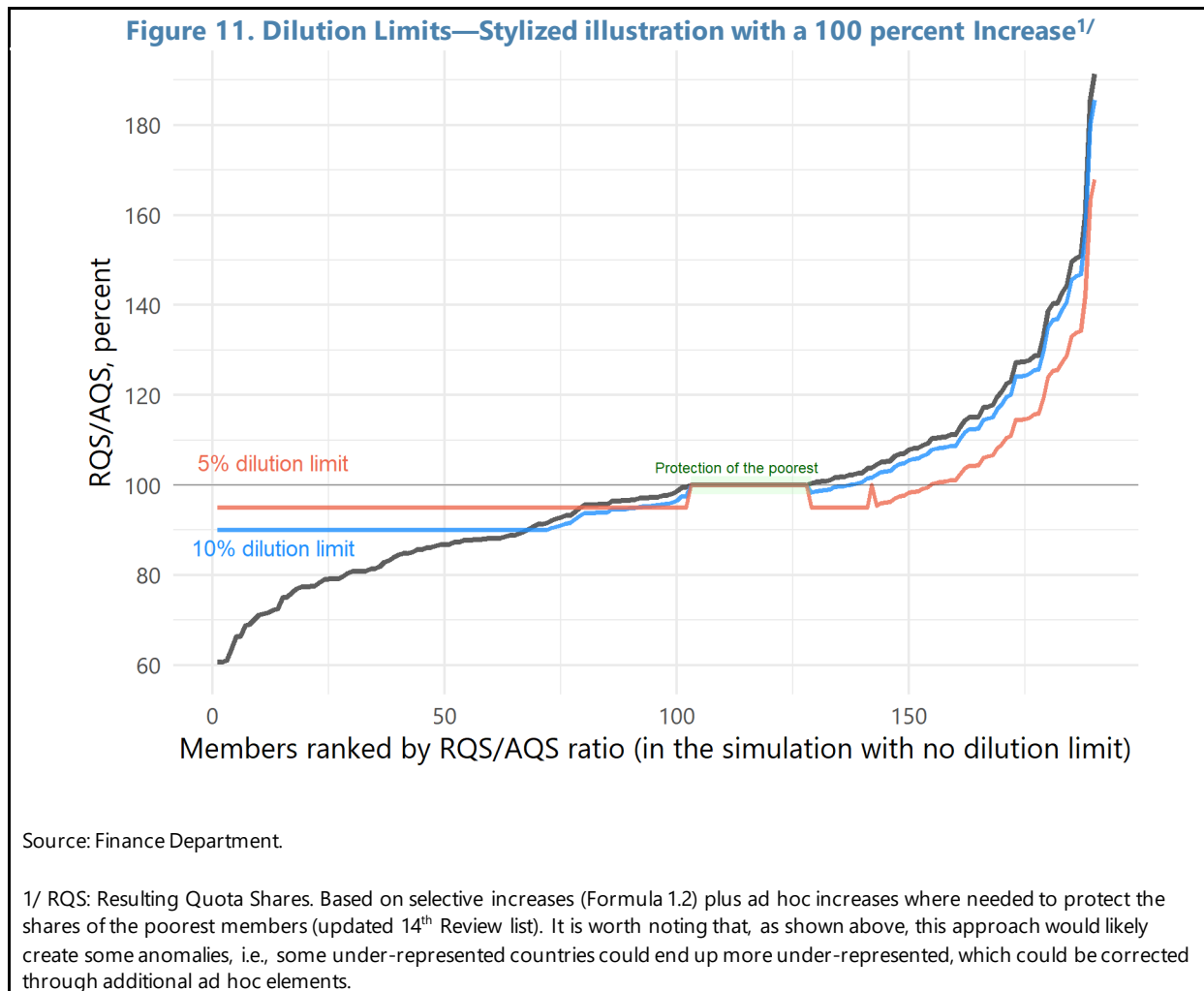
## Dilution Limits

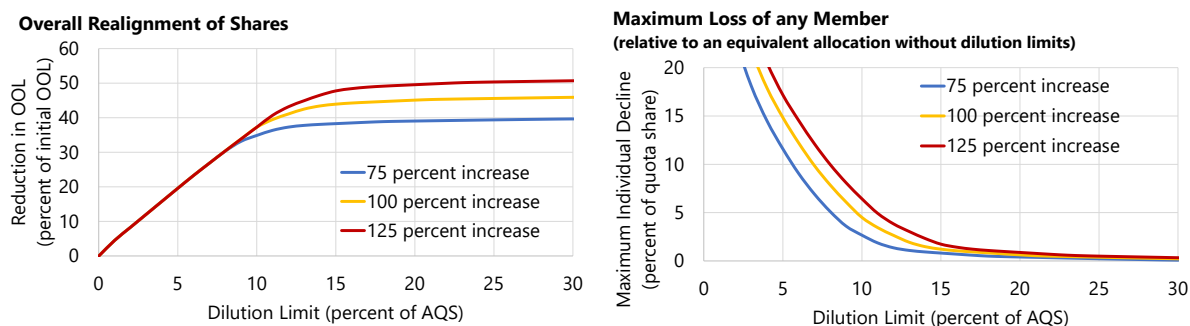
**25. Staff has updated simulations using dilution limits on the maximum decline in quota shares.** Such limits can potentially play a role in building the necessary broad consensus for a quota increase, as was the case under the 14<sup>th</sup> Review.<sup>34</sup> They could provide those members that stand to lose quota share, including from a reform of the quota formula, with assurance that the overall impact on their shares will not exceed a certain level. Whether such limits are helpful or needed may also depend on the other parameters of an increase. Protection of the poorest already provides a limit against any dilution of the share for those members covered by the protection, and a broadening of the protection list would limit the number of countries that would potentially stand to benefit from a dilution limit. Dilution limits will, however, impact members that do not benefit from such limits or other steps, for example by reducing the upward adjustment for under-represented members and accentuating declines in quota shares for over-represented members. In general, higher limits would have less impact, while lower limits could have a significant impact on the overall scope for realigning quota shares and reducing out-of-lineness.

**26. Results for introducing dilution limits are illustrated in Figures 11–13 and Table 9.** They show the potential impact of dilution limits with a 100 percent overall quota increase, based on two definitions of the poorest members: (i) the updated 14<sup>th</sup> Review list, and (ii) all PRGT-eligible members and small developing states.

- At a 5 percent dilution limit, 81 members would benefit from the limit (or 46 with the broad definition of poorest), while the largest negative impact on other members would be 14.8 percent (relative) or about 1.4 pp (absolute).
- At a 10 percent dilution limit, the impact would be more limited as 68 members would benefit from the limit (or 33 with the broad definition of poorest), while the largest negative impact on other members would be 4.5 percent or about 0.4 pp.

<sup>34</sup> The 14<sup>th</sup> Review allocation method included limits for both the maximum increase and the maximum decline in quota shares. The former was set at 60 percent while the latter was set in both relative (a maximum dilution of 30 percent) and absolute terms (0.85 pp). There was one exception for AEs: for those with losses in the selective increase but gains in the ad hoc increase, their quota shares were capped at the initial AQS.



**Figure 13. Impact of Dilution Limits<sup>1/</sup>**

Source: Finance Department.

1/ Illustrative curves are based on selective increases (Formula 1.2) plus ad hoc increases where needed to protect the shares of the poorest members (definition as indicated), under the constraints of a soft GDP anchor of 82-470 percent of GDP blend shares.

**Table 9. Dilution Limits—Summary Results with a 100 percent Increase<sup>1/</sup>****Protection of the Poorest Based on Updated 14th Review List (29 members)**

	Dilution Limit (percent of AQS)					
	5	10	15	20	25	30
Number of member that benefit from the dilution limit	81	68	43	29	16	9
Reduction in out-of-lines (percent of initial OOL)	19.6	37.2	43.9	45.1	45.6	45.9
Maximum individual loss due to the dilution limit (percent) 2/	-14.8	-4.5	-1.2	-0.6	-0.4	-0.2
Maximum individual loss due to the dilution limit (pp) 2/	-1.4	-0.4	-0.1	-0.1	0.0	0.0

**Protection of PRGT-eligible and Small Developing States (84 members)**

	Dilution Limit (percent of AQS)					
	5	10	15	20	25	30
Number of member that benefit from the dilution limit	46	33	17	8	5	4
Reduction in out-of-lines (percent of initial OOL)	19.1	36.2	43.1	44.1	44.5	44.7
Maximum individual loss due to the dilution limit (percent) 2/	-14.7	-4.4	-1.0	-0.5	-0.3	-0.2
Maximum individual loss due to the dilution limit (pp) 2/	-1.4	-0.4	-0.1	0.0	0.0	0.0

Source: Finance Department.

1/ Numbers are based on selective increases (Formula 1.2) plus ad hoc increases to protect the shares of the poorest members (definition as indicated), under the constraints of a soft GDP anchor of 82-470 percent of GDP blend shares. Figures are broadly similar to the other allocation methods presented in this paper.

2/ Measured relative to an allocation with the same specifications, but no dilution limit.

## UPDATING COUNTRY GROUPINGS

**27. The current country groupings used for quota work date back to the 11<sup>th</sup> Review.** They were derived from *WEO* classifications at the time and have not been updated since 1998, while there have been several modifications to country classifications used in the *WEO*. The main reason for maintaining the current country groupings was to facilitate comparisons in the cumulative impact of the quota reform process initiated in 2006—including the cumulative shifts of quota share from AEs to EMDCs—in a way that is not affected by country reclassifications. The Board considered updating the country classifications used for quotas early in the 14<sup>th</sup> Review and again in the 15<sup>th</sup> Review, but the current classifications were maintained, in part to ensure continuity with previous quota reforms.

**28. The country classifications used for quota related discussions have become increasingly outdated when compared to the *WEO* classification.** In particular, Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia are all now classified as advanced economies in the *WEO* but are still included in EMDCs for the purposes of quota work (see Supplement 1, Annex IV).

**29. With a new round of quota discussions now getting underway, this could be an opportune time to align the country groups with the current *WEO* classifications.** Aligning the country groups would make them consistent with those used by the Fund for most other purposes<sup>35</sup> and would arguably provide an economically more meaningful basis for country comparisons and organizing the data. It would also signal recognition that country groupings are dynamic and that countries can move over time between different groupings, notably from the EMDCs to the AEs group. While this would make it somewhat harder to compare cumulative changes in quota shares of major country groups over time, the dynamic nature of country groupings also means that their importance as an indicator of governance reform should not be overstated.

**30. The impact of such a realignment is discussed in Supplement 1, Annex IV.** Aligning the country groups used for quota purposes with the current *WEO* classification would currently move 3.7 percentage points of AQS from EMDCs to AEs, and the corresponding shift of CQS from EMDCs to AEs would be 4.8 percentage points, using the current quota formula (Table 10). If Directors consider that a reclassification were appropriate at this juncture, staff could use the *WEO*-based country groupings starting from the next staff paper for the Committee of the Whole. In the event of future changes in the *WEO* country classifications, staff would revert to the Board to consider whether and when to further update the country groups used for quota purposes.

<sup>35</sup> However, e.g., in [Proposal For a General Allocation of Special Drawing Rights \(5/27/21\)](#), the quota classification for country groups was used to describe the aggregate shares of the allocation that would go to AEs and EMDCs.

**Table 10. WEO Classification—Summary Results**

Country Groups according to WEO 3/ WEO (closest quota data concept when available)	14th Review Quota Shares 1/			Calculated Quota Shares (2019) 2/		
	Current Classification	WEO Classification	Difference	Current Classification	WEO Classification	Difference
<b>Advanced economies 4/</b>	57.6	61.3	3.7	50.0	54.8	4.8
<b>Major advanced economies</b>	43.4	43.4	0.0	35.3	35.3	0.0
<b>Other advanced economies</b>	14.3	17.9	3.7	14.7	19.5	4.8
<b>Emerging Market and Developing Countries 5/</b>	42.4	38.7	-3.7	50.0	45.2	-4.8
<b>Sub-Saharan Africa (Africa)</b>	4.4	3.5	-0.9	3.4	2.7	-0.8
<b>Emerging and Developing Asia (Asia)</b>	16.0	13.0	-3.1	26.2	22.3	-3.9
<b>Middle East and Central Asia</b> (Middle East, Malta & Turkey)	6.7	7.8	1.0	6.6	7.3	0.7
<b>Latin America and the Caribbean (Western Hemisphere)</b>	7.9	7.9	0.0	6.7	6.7	0.0
<b>Emerging and Developing Europe</b> (Transition Economies) 6/	7.2	6.5	-0.7	7.1	6.3	-0.8
Total	100.0	100.0		100.0	100.0	

Source: Finance Department.

1/ Includes South Sudan, Nauru and Andorra which became members on April 18, 2012, April 12, 2016 and October 16, 2020, respectively.

2/ Based on the current formula. The data update covers data through 2019.

3/ World Economic Outlook, April 2021.

4/ Including Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia.

5/ The name in parentheses indicate the closest group name under the current classification, see Supplement 1, Table IV.1 for more detail.

6/ Comprises the WEO categories "Commonwealth of Independent States" and "Emerging and Developing Europe". This grouping is broadly comparable to the Transition Economies. Includes Turkey.

## ENTERPRISE RISKS

### 31. Issues related to the quota formula and realignment of quota shares have important implications for broader enterprise risks. Specifically:

- **Strategic.** An agreement on a new quota formula and realignment in quota shares, which could be facilitated by an increase in quotas, is of strategic importance for the effectiveness of the Fund. Active engagement on the 16<sup>th</sup> Review by the entire membership as well as the Executive Board's regular progress reports to the Board of Governors and further guidance from the IMFC in due course can help mitigate risks in these areas.
- **Reputational.** The legitimacy of the Fund would be affected if a quota realignment were not to take place or were widely considered inadequate. Measures to mitigate strategic risks (see above) can help also in mitigating reputational risk, and staff's analysis and adequate use of the analytical framework by the Executive Board, combined with appropriate communication to the wide public, can also help mitigate these risks.
- **Other.** An agreement on a new quota formula and realignment of quota shares will likely require compromises from all sides. Risks of dissatisfaction, including by members that would lose quota shares, can be mitigated by managing expectations and by clear and open

communication with the membership during the deliberations on the 16<sup>th</sup> Review, and, at the appropriate time, through outreach to the wider public.

## ISSUES FOR DISCUSSION

**32. This paper seeks to provide background for an initial discussion of the Committee of the Whole on the quota formula and realignment of quota shares.** The discussion is taking place in the context of the 16<sup>th</sup> Review, with a companion paper, discussed separately, addressing issues relating to the size of the Fund and the adequacy of quota resources.

**33. The paper does not present any proposals at this early stage of the discussions on the 16<sup>th</sup> Review, pending further guidance from Executive Directors.** The paper provides background on earlier staff work and discussions of Directors, and updates simulations of possible reforms of the formula and approaches to realigning quota shares. The paper also includes an update of the quota database by an additional year through 2019.

**34. Directors may wish to comment on the following:**

- i. Do Directors consider that the principles that guided the 2008 quota formula remain valid and that the work on the quota formula should build on progress already made, including the outcome of the 2013 Quota Formula Review and work during the 15<sup>th</sup> Review? What do Directors see as the most promising approaches to a reform of the quota formula that could command broad support?
- ii. What are Directors' views on the possible approaches to realigning quota shares? Are there particular elements or approaches that would be helpful in advancing the discussions and guiding future staff work, such as the "soft anchor" and dilution limits?
- iii. What are Directors' views on whether, and if so how, to recognize voluntary financial contributions in the context of the 16<sup>th</sup> Review?
- iv. What are Directors' views on the list of the poorest members that should be eligible for protection under the 16<sup>th</sup> Review, and the option of also covering small developing states?
- v. What are Directors' views on updating the country classification used for quota related discussions and aligning it with the current *WEO* classification?
- vi. In previous discussions, some Directors called for setting specific early milestones for the discussions on the 16<sup>th</sup> Review, while others stressed that nothing would be agreed until everything is agreed as a package. What if any practical interim steps do Directors see as helpful to build a timely consensus for the 16<sup>th</sup> Review?

## Appendix I. Updated Quota Database

*This Appendix presents the results of the annual update of the quota database, prepared jointly with STA, which extends the database by one year through 2019.<sup>1</sup> The update covers the quota formula variables and calculated quota shares (CQS) based on the current quota formula (Box 1).<sup>2</sup> A detailed overview of the data and methodology used in the update and the construction of the database can be found in Supplement 2.*

### Developments in Calculated Quota Shares

**1. In terms of broad country groups, the data update shows a small increase in the aggregate share of EMDCs by 0.2 pp to 50.0 percent, reversing a similar-sized decline in the EMDC share in last year's quota data update (Table I.1).** This result is driven mostly by rising GDP shares, both market and PPP-based, for EMDCs. The EMDCs' share for Asia recorded a gain (0.5 pp)—resuming its earlier upward trend (Figure I.1)—driven mainly by China's expanding GDP share in the world, while the EMDCs' shares of Africa and Transition Economies remained the same and those of Middle East and North Africa and Western Hemisphere declined slightly (-0.1 pp). Among major AEs (decrease of 0.2 pp), the shares of Japan and United Kingdom declined slightly (-0.1 pp) while those of other countries remained broadly unchanged.<sup>3</sup> The share of other AEs as a group remained the same.

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<sup>1</sup> The quota database has been updated annually since the adoption of the current quota formula in 2008.

<sup>2</sup> As in previous years, data on openness excluding intra-currency union flows, measures of voluntary financial contributions, and updated lists of the poorest and smallest members are also provided (see Supplement 1, Annexes I-III).

<sup>3</sup> Germany's share declined by 0.014 pp (from 4.862 pp to 4.849 pp) but appears as a decline by 0.1 pp in Table I.1 due to rounding (from 4.9 to 4.8 percent).

**Table I.1. Updated Quota Formula Variables<sup>1/</sup>**  
(In percent)

	14 <sup>th</sup>	CQS (Current Formula)		MER GDP		PPP GDP		GDP Blend		Openness		Variability		Reserves	
	Review	Current	Previous	Current	Previous	Current	Previous	Current	Previous	Current	Previous	Current	Previous	Current	Previous
<b>Advanced economies</b>	<b>57.6</b>	<b>50.0</b>	<b>50.2</b>	<b>55.8</b>	<b>56.6</b>	<b>39.6</b>	<b>40.2</b>	<b>49.3</b>	<b>50.0</b>	<b>57.3</b>	<b>57.1</b>	<b>52.1</b>	<b>52.0</b>	<b>28.2</b>	<b>27.7</b>
<b>Major advanced economies</b>	<b>43.4</b>	<b>35.3</b>	<b>35.5</b>	<b>45.8</b>	<b>46.4</b>	<b>32.4</b>	<b>32.9</b>	<b>40.4</b>	<b>41.0</b>	<b>37.6</b>	<b>37.6</b>	<b>31.9</b>	<b>31.9</b>	<b>16.5</b>	<b>16.0</b>
United States	17.4	14.9	14.9	24.4	24.5	16.2	16.3	21.1	21.2	13.6	13.4	11.2	11.2	1.2	1.1
Japan	6.5	4.9	5.0	5.9	6.1	4.2	4.3	5.2	5.4	3.9	4.0	4.8	4.8	11.5	11.2
Germany	5.6	4.8	4.9	4.6	4.6	3.6	3.6	4.2	4.2	7.1	7.1	5.2	5.0	0.6	0.6
France	4.2	3.1	3.1	3.2	3.3	2.5	2.5	2.9	3.0	3.9	4.0	2.8	2.7	0.6	0.6
United Kingdom	4.2	3.4	3.5	3.3	3.4	2.5	2.5	3.0	3.1	4.2	4.3	3.9	4.4	1.4	1.3
Italy	3.2	2.3	2.3	2.4	2.5	2.0	2.1	2.3	2.3	2.5	2.5	2.3	2.2	0.5	0.5
Canada	2.3	1.9	1.9	2.0	2.0	1.5	1.5	1.8	1.8	2.4	2.4	1.6	1.6	0.8	0.8
<b>Other advanced economies</b>	<b>14.3</b>	<b>14.7</b>	<b>14.7</b>	<b>10.0</b>	<b>10.1</b>	<b>7.2</b>	<b>7.3</b>	<b>8.9</b>	<b>9.0</b>	<b>19.7</b>	<b>19.6</b>	<b>20.2</b>	<b>20.2</b>	<b>11.6</b>	<b>11.6</b>
Spain	2.0	1.7	1.7	1.6	1.7	1.5	1.5	1.6	1.6	1.9	1.9	1.9	1.9	0.5	0.5
The Netherlands	1.8	2.0	2.0	1.1	1.1	0.8	0.8	0.9	0.9	3.6	3.6	2.6	2.7	0.1	0.1
Australia	1.4	1.3	1.4	1.7	1.7	1.0	1.0	1.4	1.4	1.3	1.3	1.2	1.3	0.4	0.5
Belgium	1.3	1.1	1.1	0.6	0.6	0.5	0.5	0.6	0.6	1.8	1.8	1.6	1.5	0.2	0.2
Switzerland	1.2	1.9	1.8	0.9	0.9	0.5	0.5	0.7	0.7	2.4	2.3	3.0	2.8	7.0	7.0
Sweden	0.9	0.9	0.9	0.6	0.7	0.4	0.4	0.6	0.6	1.0	1.1	1.3	1.3	0.5	0.5
Austria	0.8	0.7	0.7	0.5	0.5	0.4	0.4	0.5	0.5	0.9	0.9	0.9	0.9	0.1	0.1
Norway	0.8	0.6	0.7	0.5	0.5	0.3	0.3	0.4	0.4	0.7	0.7	1.1	1.2	0.6	0.6
Ireland	0.7	1.0	1.0	0.4	0.4	0.3	0.3	0.4	0.4	2.0	1.7	1.1	1.3	0.0	0.0
Denmark	0.7	0.6	0.6	0.4	0.4	0.3	0.3	0.4	0.4	0.7	0.8	0.6	0.6	0.6	0.7
<b>EMDCs 2/</b>	<b>42.4</b>	<b>50.0</b>	<b>49.8</b>	<b>44.2</b>	<b>43.4</b>	<b>60.4</b>	<b>59.8</b>	<b>50.7</b>	<b>50.0</b>	<b>42.7</b>	<b>42.9</b>	<b>47.9</b>	<b>48.0</b>	<b>71.8</b>	<b>72.3</b>
<b>Africa</b>	<b>4.4</b>	<b>3.4</b>	<b>3.4</b>	<b>2.5</b>	<b>2.5</b>	<b>4.0</b>	<b>4.0</b>	<b>3.1</b>	<b>3.1</b>	<b>2.3</b>	<b>2.4</b>	<b>3.8</b>	<b>3.8</b>	<b>2.5</b>	<b>2.7</b>
South Africa	0.6	0.5	0.5	0.4	0.4	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4
Nigeria	0.5	0.6	0.6	0.5	0.5	0.8	0.8	0.6	0.6	0.3	0.3	0.6	0.6	0.4	0.4
<b>Asia</b>	<b>16.0</b>	<b>26.2</b>	<b>25.7</b>	<b>26.2</b>	<b>25.4</b>	<b>34.4</b>	<b>33.6</b>	<b>29.5</b>	<b>28.7</b>	<b>23.1</b>	<b>23.0</b>	<b>20.9</b>	<b>20.7</b>	<b>44.0</b>	<b>44.0</b>
China 3/	6.4	13.7	13.4	16.5	15.7	17.4	16.9	16.9	16.2	11.2	11.1	11.8	11.7	28.1	28.4
India	2.7	3.4	3.4	3.3	3.2	7.0	7.0	4.8	4.7	2.2	2.1	1.7	1.8	3.6	3.5
Korea	1.8	2.1	2.1	2.0	2.0	1.7	1.8	1.9	1.9	2.4	2.5	1.4	1.2	3.6	3.6
Indonesia	1.0	1.3	1.3	1.3	1.2	2.5	2.4	1.7	1.7	0.8	0.8	0.8	0.8	1.1	1.1
Singapore	0.8	1.4	1.4	0.4	0.4	0.4	0.4	0.4	0.4	2.4	2.4	1.9	1.8	2.5	2.6
Malaysia	0.8	0.7	0.7	0.4	0.4	0.7	0.7	0.5	0.5	0.9	0.9	0.7	0.7	0.9	0.9
Thailand	0.7	1.0	1.0	0.6	0.6	1.0	1.0	0.8	0.7	1.1	1.1	1.1	1.1	1.9	1.8
<b>Middle East, Malta and Turkey</b>	<b>6.7</b>	<b>6.6</b>	<b>6.7</b>	<b>4.5</b>	<b>4.5</b>	<b>6.7</b>	<b>6.8</b>	<b>5.4</b>	<b>5.4</b>	<b>5.5</b>	<b>5.7</b>	<b>8.9</b>	<b>8.8</b>	<b>9.2</b>	<b>9.9</b>
Saudi Arabia	2.1	1.5	1.5	0.9	0.9	1.3	1.3	1.1	1.0	1.0	1.0	2.5	2.5	4.5	4.6
Turkey	1.0	1.2	1.2	1.0	1.0	1.9	1.9	1.3	1.4	0.9	0.9	1.2	1.1	0.7	0.7
Iran	0.7	0.5	0.6	0.6	0.5	0.9	0.9	0.7	0.7	0.3	0.3	0.4	0.4	0.1	1.0
<b>Western Hemisphere</b>	<b>7.9</b>	<b>6.7</b>	<b>6.8</b>	<b>6.3</b>	<b>6.6</b>	<b>7.8</b>	<b>8.0</b>	<b>6.9</b>	<b>7.2</b>	<b>5.0</b>	<b>5.1</b>	<b>6.0</b>	<b>6.1</b>	<b>7.8</b>	<b>7.7</b>
Brazil	2.3	1.9	2.0	2.3	2.4	2.5	2.5	2.4	2.4	1.0	1.1	1.4	1.6	3.4	3.4
Mexico	1.9	1.7	1.7	1.4	1.4	2.0	2.1	1.7	1.7	1.8	1.8	1.4	1.5	1.6	1.6
Venezuela	0.8	0.2	0.3	0.1	0.2	0.2	0.3	0.2	0.3	0.1	0.2	0.5	0.5	0.0	0.0
Argentina	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.7	0.8	0.3	0.3	0.5	0.5	0.5	0.5
<b>Transition economies</b>	<b>7.2</b>	<b>7.1</b>	<b>7.1</b>	<b>4.7</b>	<b>4.5</b>	<b>7.4</b>	<b>7.4</b>	<b>5.8</b>	<b>5.7</b>	<b>6.7</b>	<b>6.7</b>	<b>8.2</b>	<b>8.6</b>	<b>8.4</b>	<b>8.1</b>
Russian Federation	2.7	2.2	2.3	2.0	1.9	3.1	3.2	2.4	2.4	1.7	1.7	1.9	2.5	3.8	3.5
Poland	0.9	1.0	1.0	0.7	0.7	1.0	1.0	0.8	0.8	1.1	1.1	0.9	0.9	1.0	1.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Memorandum Items:</b>															
EU-27 4/	26.1	23.4	23.3	18.4	18.5	15.7	15.9	17.3	17.5	32.0	32.0	27.4	27.0	7.5	7.4
LICs 5/	3.3	2.4	2.4	1.8	1.7	3.1	3.0	2.3	2.2	1.6	1.6	2.1	2.2	1.5	1.5

Source: Finance Department.

1/ Data columns marked as "current" refer to the 2021 quota data update (data through 2019); "previous" refers to the 2020 quota data update (data through 2018).

2/ Including Czech Republic, Estonia, Korea, Latvia, Lithuania, Malta, Singapore, Slovak Republic, and Slovenia.

3/ Including China, P.R., Hong Kong SAR, and Macao SAR.

4/ Reflects EU membership as of end-January 2021 and excludes the United Kingdom.

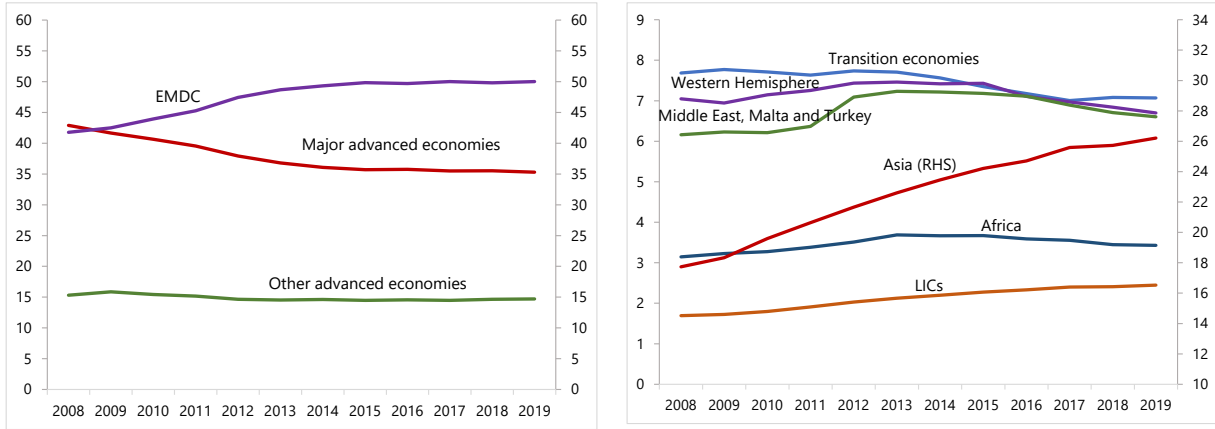
5/ Currently PRGT-eligible countries (69 members), reflecting the decision to graduate Guyana from PRGT eligibility effective July 19, 2020.

**Figure I.1. Calculated Quota Shares, 2008–19**

(In percent)

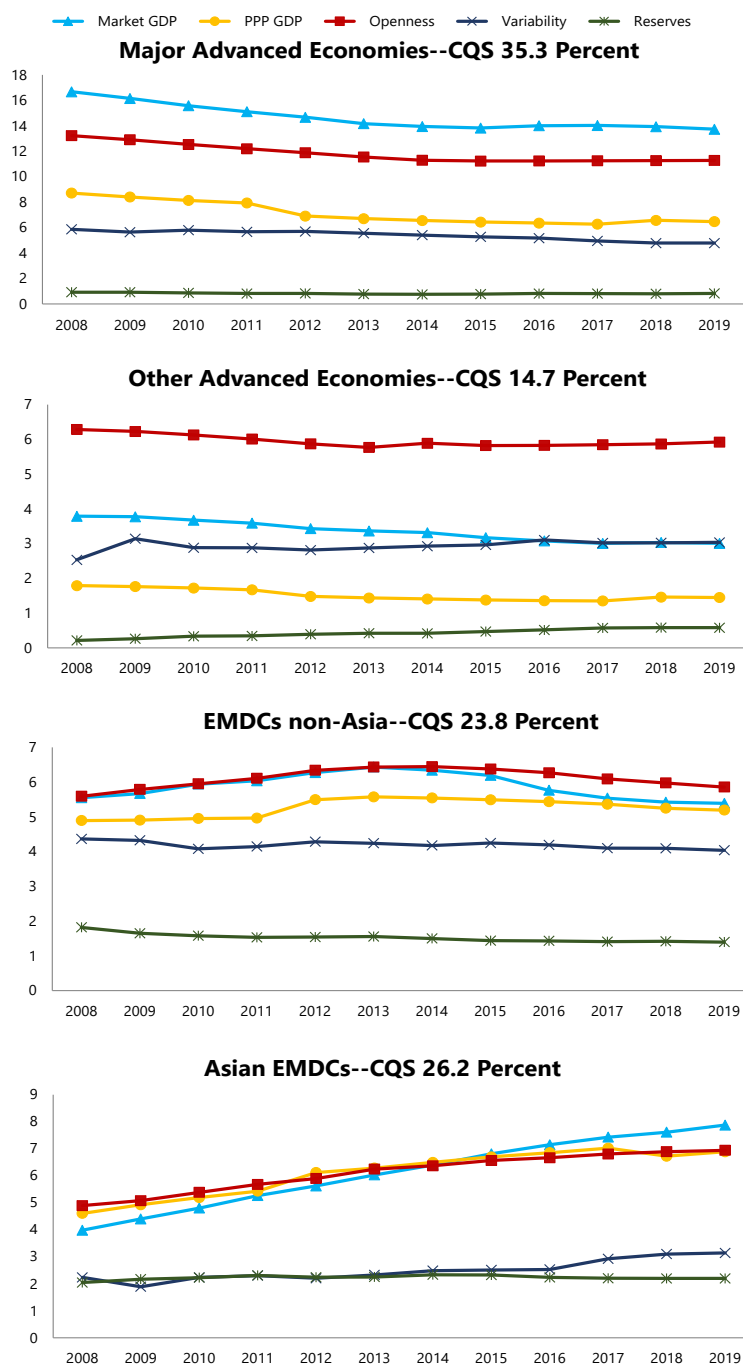
The share of EMDCs as a whole has been broadly stable since the mid-2010s...

... but within the group of EMDCs, Asia has continued to gain share, as have LICs albeit more moderately.



Source: Finance Department.

**Figure I.2. Contributions of Quota Variables to CQS by Major Country Groups**  
(in percentage points)



Source: Finance Department.

**2. Absolute changes in CQS for individual members are generally small with China as the main exception** (Table I.2). Among the gainers, China recorded the largest individual increase in CQS (0.30 pp), followed by Vietnam (0.07 pp), Switzerland, and Ireland (0.05 pp each). China’s increase reflected gains in all quota variables except for reserves but especially its GDP shares;

Vietnam's increase mainly reflected GDP and Openness; Switzerland's and Ireland's increases mainly reflected variability and openness, respectively. The United Kingdom (-0.12 pp) and Japan (-0.09 pp) recorded the largest absolute declines in CQS, mainly due to declines in variability and market GDP shares, respectively. Six of the ten largest declines in CQS were, however, in EMDCs, including Russia (-0.08 pp), mainly reflecting a decline in the variability share, Brazil (-0.06 pp), mainly reflecting declines in both variability and market GDP shares, Venezuela (-0.06 pp), mainly reflecting a decline in market GDP share, and Iran (-0.05 pp), mainly reflecting a decline in the official reserves' share.<sup>4</sup>

**3. Relative changes in CQS, as in previous updates, were most pronounced for some smaller members** (Table I.3). The largest relative increase in CQS was for Kiribati (70 percent), followed by Vanuatu (29 percent), Haiti (26 percent), and Tuvalu (24 percent). The increase in Kiribati and Tuvalu was mainly explained by reserves, the former reflecting an upward correction in the reserves data,<sup>5</sup> while the increase in Vanuatu and Haiti was mainly explained, respectively, by variability and GDP (the latter due largely to a GDP data revision). The largest relative declines in CQS were for Afghanistan (-29 percent), Venezuela (-21 percent), San Marino (-20 percent), and São Tomé and Príncipe (-15 percent), mainly reflecting declines in variability except for Venezuela where it reflected mainly declines in market GDP share.

**Table I.2. Largest Absolute Changes in Calculated Quota Shares<sup>1/</sup>**

	Calculated Quota Shares (CQS)		Contribution of Variables to Absolute Change in CQS (pp) 2/						
	Absolute Change (pp)		MER GDP (A)	PPP GDP (B)	GDP Blend (C = A+B)	Openness (D)	Variability (E)	Reserves (F)	Sum (C+D+E+F)
<b>Largest Increases in CQS</b>	China	0.303	0.233	0.101	0.334	0.015	0.009	-0.013	0.345
	Vietnam	0.070	0.003	0.034	0.037	0.022	0.005	0.004	0.068
	Switzerland	0.047	0.001	-0.002	-0.001	0.017	0.030	0.003	0.049
	Ireland	0.046	0.006	0.003	0.009	0.068	-0.031	0.000	0.046
	India	0.039	0.024	0.016	0.040	0.008	-0.013	0.006	0.041
	Philippines	0.025	0.006	0.009	0.016	0.005	0.000	0.003	0.024
	Singapore	0.025	0.002	0.000	0.002	0.017	0.011	-0.004	0.025
	United States	0.024	-0.031	-0.035	-0.066	0.083	0.006	0.001	0.024
	Poland	0.020	0.005	0.002	0.007	0.007	0.005	0.000	0.019
	Czech Republic	0.015	0.003	0.001	0.004	0.002	0.009	-0.001	0.014
<b>Largest Declines in CQS</b>	United Kingdom	-0.117	-0.035	-0.004	-0.039	-0.020	-0.069	0.003	-0.125
	Japan	-0.086	-0.072	-0.029	-0.102	-0.010	0.000	0.016	-0.095
	Russian Federation	-0.075	0.023	-0.005	0.018	-0.028	-0.084	0.015	-0.079
	Brazil	-0.061	-0.022	-0.011	-0.033	-0.007	-0.022	-0.002	-0.064
	Venezuela	-0.059	-0.029	-0.016	-0.045	-0.012	0.002	0.000	-0.055
	Iran	-0.052	0.009	-0.012	-0.003	-0.009	0.003	-0.041	-0.050
	United Arab Emirates	-0.028	0.002	0.000	0.002	-0.005	-0.030	0.004	-0.028
	Argentina	-0.028	-0.024	-0.001	-0.025	-0.002	0.000	0.000	-0.027
	Australia	-0.025	-0.011	-0.002	-0.013	-0.001	-0.010	-0.002	-0.026
	Norway	-0.023	-0.003	-0.001	-0.003	-0.010	-0.010	0.001	-0.023

Source: Finance Department.

1/ Current and previous calculations are based on data through 2019 and 2018 respectively, using the existing formula.

2/ Difference between the current dataset through 2019 and the previous dataset through 2018, multiplied by the variable weight in the quota formula. The change in CQS also reflects the effect of compression.

<sup>4</sup> See Supplement 2 Statistical Appendix for more details.

<sup>5</sup> For Kiribati, the correction unwinds the large relative decrease (-38 percent) in CQS in last year's quota data update (see FO/DIS/20/208, page 9). See also Section C in Supplement 2 Statistical Appendix.

**Table I.3. Largest Relative Changes in Calculated Quota Shares<sup>1/</sup>**

	Calculated Quota Shares (CQS)	Contribution of Variables to Relative Change in CQS (pp) 2/						
	Relative Change (percent)	MER GDP (A)	PPP GDP (B)	GDP Blend (C = A+B)	Openness (D)	Variability (E)	Reserves (F)	Sum (C+D+E+F)
<b>Largest Increases in CQS</b>								
Kiribati	70.0	0.0	-0.1	-0.1	-2.0	3.3	73.7	74.8
Vanuatu	29.1	-0.1	0.0	-0.1	1.4	28.1	1.4	30.9
Haiti	25.5	12.6	13.1	25.8	0.5	1.4	-0.7	26.9
Tuvalu	24.4	0.8	0.1	0.9	2.9	7.9	14.1	25.8
Côte d'Ivoire	18.5	9.8	10.0	19.8	-0.1	0.1	-0.2	19.6
Mauritania	15.0	6.4	9.4	15.7	0.5	-0.7	0.3	15.9
Guyana	14.5	5.5	5.6	11.1	3.5	0.3	0.3	15.3
Togo	12.9	6.8	7.2	14.0	-1.1	0.7	0.0	13.6
Vietnam	12.4	0.5	6.6	7.1	4.2	0.9	0.9	13.1
Cambodia	11.9	0.9	0.7	1.6	4.3	4.1	2.5	12.6
<b>Largest Declines in CQS</b>								
Afghanistan	-28.7	-1.4	-2.0	-3.4	0.0	-26.8	0.2	-30.0
Venezuela	-20.7	-11.4	-6.3	-17.7	-4.7	0.6	0.1	-21.7
San Marino	-19.5	-0.2	-0.1	-0.3	-1.0	-19.6	0.4	-20.4
São Tomé and Príncipe	-14.8	0.1	-0.3	-0.2	-1.2	-13.8	-0.3	-15.5
Timor-Leste	-11.9	-6.3	-5.4	-11.8	-1.5	0.3	0.5	-12.5
Sudan	-11.5	-10.0	-2.5	-12.5	-0.3	0.7	0.0	-12.1
Micronesia	-10.6	0.3	-0.2	0.2	-6.5	-11.4	6.6	-11.1
Iran	-8.6	1.6	-2.2	-0.6	-1.6	0.5	-7.4	-9.1
Djibouti	-8.1	0.4	0.2	0.6	3.3	-12.5	0.1	-8.5
Angola	-6.8	-1.8	-0.6	-2.4	-3.7	-0.7	-0.3	-7.2

Source: Finance Department.

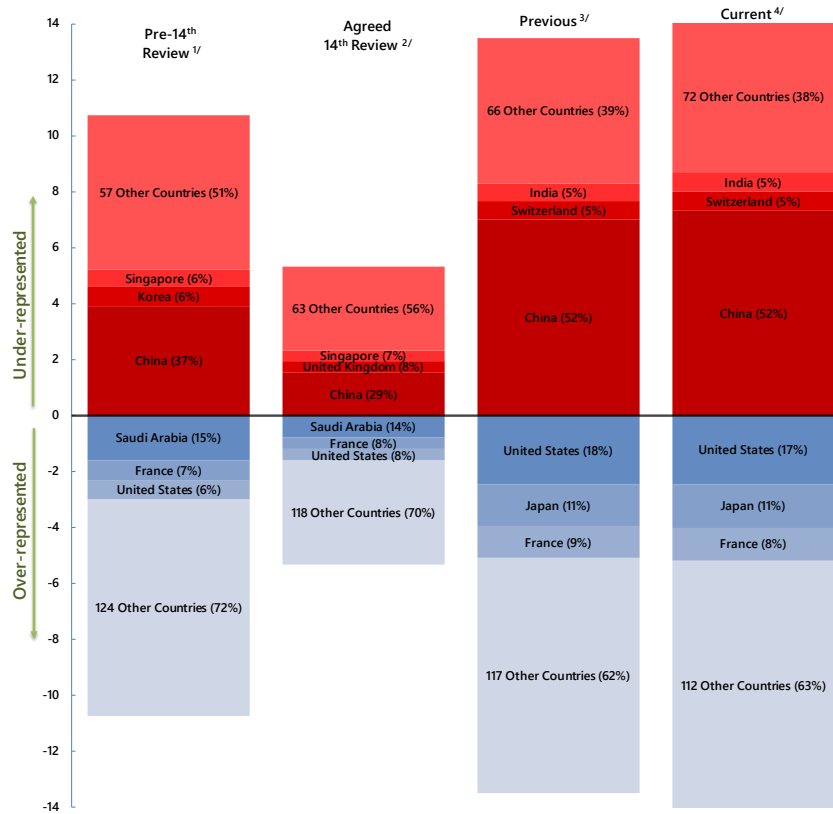
1/ Current and previous calculations are based on data through 2019 and 2018 respectively, using the existing formula.

2/ Difference between the current dataset through 2019 and the previous dataset through 2018, multiplied by the variable weight in the quota formula, and divided by the weighted sum of variables in the previous dataset. The change in CQS also reflects the effect of compression.

## Developments in Out-of-Liness

**4. Out-of-liness based on the current quota formula has increased further** (Figure I.3). Aggregate out-of-liness, measured as the sum of all positive differences between CQS and agreed 14<sup>th</sup> Review quota shares, reached 14.1 pp with the current data update, compared with 13.5 pp in the previous update. At the aggregate level, AEs are over-represented and EMDCs under-represented by 7.7 pp (previously, 7.6 pp). The number of under-represented members increased with the data update (to 75 from 70), and China's underrepresentation of 7.3 pp accounts for about 52 percent of total out-of-liness.

**Figure I.3. Out-of-Lineness (OOL)**  
(In percentage points, in percent of total OOL)



Source: Finance Department.

1/ Difference between CQS (current formula, data through 2008) and 2008 Reform AQS (187 members).

2/ Difference between CQS (current formula, data through 2008) and 14th Review AQS (187 members).

3/ Difference between CQS (current formula, data through 2018) and 14th Review AQS (189 members).

4/ Difference between CQS (current formula, data through 2019) and 14th Review AQS (190 members).

## Appendix II. Summary of Recent Discussions on the Quota Formula and Realignment of Quota Shares

*This Appendix summarizes selected key points of the discussions on the quota formula and realignment of quota shares since the 2013 QFR. More details on the quota formula variables can be found in Annex I in Supplement 1.*

### **2020 Quota Data Update (October 23, 2020):** [Quota Data Update](#)

Quota variables: staff incorporated the updated PPP price level indices from the 2017 International Comparison Program (ICP).

Openness: staff updated previous estimates of the impact of excluding intra-currency union trade.

Poorest members: staff provided an update of the definition used in the 14<sup>th</sup> Review and alternative lists for identifying the poorest members.

Voluntary financial contributions: staff updated data on the main indicators of financial contributions and illustrated possible ways to combine them.

### **2019 Quota Data Update (February 4, 2020):** [Quota Data Update](#)

Openness: staff updated previous estimates of the impact of excluding intra-currency union trade.

Poorest members: staff provided an update of the definition used in the 14<sup>th</sup> Review and alternative lists for identifying the poorest members.

Voluntary financial contributions: staff updated data on the main indicators of financial contributions and illustrated possible ways to combine them.

### **15<sup>th</sup> Review (July 3, 2018):** [Fifteenth General Review of Quotas—Additional Considerations and Data Update](#)

Quota formula: staff presented illustrative simulations of possible reforms of the quota formula and updated the previous four sets of simulations as well as the technical exercise based on the midpoint approach.

Openness: staff updated previous estimates of the impact of excluding intra-currency union trade.

Poorest members: staff provided an update of the definition used in the 14<sup>th</sup> Review and introduced alternative lists for identifying the poorest members. Illustrative simulations were also proposed to illustrate the cost of protection.

Voluntary financial contributions: staff updated data on the main indicators of financial contributions and illustrated possible ways to combine them.

Allocation: staff provided illustrative allocations based on selective increases, with ad hoc elements to protect the poorest members and to take into account financial contributions. Other illustrations were presented, based on the “soft” GDP anchor, which distributes the quota increase based on a formula except when a member’s quota share exceeds thresholds based on its GDP blend share, as well as dilution limits.

### **15<sup>th</sup> Review (May 1, 2018):** [Fifteenth General Review of Quotas—Further Considerations](#)

Variability: staff updated work on the relationships between variability and balance of payments difficulties and between variability and Fund arrangements. It showed that calculated correlations are very weak, which is consistent with earlier work.

PPP GDP: staff assessed the extent to which market exchange rate and PPG GDP have converged since the introduction of PPP GDP in the quota formula. It showed that the price level convergence had been modest.

Poorest members: staff provided an update of the definition used in the 14<sup>th</sup> Review and introduced alternative lists for identifying the poorest members. Illustrative simulations were also proposed to illustrate the cost of protection.

Voluntary financial contributions: staff updated data on the main indicators of financial contributions and illustrated possible ways to combine them.

Allocation: staff provided illustrative allocations based on selective increases, with ad hoc elements to protect the poorest members and to take into account voluntary financial contributions. They also illustrated the impact of tools that can be used to broaden support, such as constraints on the maximum size of any individual member's quota share increase or decline, or ad hoc corrections of anomalies.

**15<sup>th</sup> Review (August 2, 2017):** [\*Fifteenth General Review of Quotas—Quota Formula and Realigning Shares\*](#)

Quota formula: staff presented illustrative simulations of possible reforms of the quota formula.

Simulations were based on four sets: (i) set 1: simplification of the current formula, dropping variability while keeping current GDP and openness measures, (ii) set 2: same as set 1 with different compositions of GDP blend, (iii) set 3: same as set 1 with different openness measures, and (iv) set 4: same as set 1 with different degrees of compression. Another technical exercise was conducted to identify reforms that yield results near the midpoint of those implied by the current formula and the GDP-only formula.

Openness: staff updated previous estimates of the impact of excluding intra-currency union trade.

Poorest members: staff provided an update of the definition used in the 14<sup>th</sup> Review and introduced alternative lists for identifying the poorest members. Illustrative simulations were also proposed to illustrate the cost of protection.

Voluntary financial contributions: staff updated data on the main indicators of financial contributions and illustrated possible ways to combine them.

Allocation: staff provided illustrative allocations based on selective increases, with ad hoc elements to protect the poorest members and to take into account voluntary financial contributions.

Table II.1. Discussions on the Quota Formula Variables during the QFR

Variables	Purpose	Key Issues	Outcome of the QFR
<b>GDP</b>	It is the most comprehensive measure of economic size: <ul style="list-style-type: none"> <li>Market GDP: reflects the member's ability to contribute to the Fund's finances</li> <li>PPP GDP: reflects the member's weight in the global economy from the perspective of the Fund's non-financial activities</li> </ul>	There were questions on whether PPP GDP should be included in the formula and on its appropriate weight.	It was reiterated that GDP should remain the most important variable with the largest weight in the formula with scope to further increase its weight and adjust its composition between market and PPP GDP in the GDP blend variable. Staff work assessed the distributional impact of adjusting the market and PPP GDP blend shares.
<b>Openness</b>	It captures the member's integration in the world economy. Countries that are relatively more open to trade and financial flows may have a greater stake in promoting global economic and financial stability, as well as global trade and financial integration.	It enters the quota formula on a gross rather than a value-added basis, which creates distortions because of double-counting of cross-border flows. There was a question whether intra-currency union flows should be excluded.	It was agreed that openness should continue to play an important role in the formula, but views varied on its appropriate weight and measurement. Several options were examined to bridge the different views, including the possible use of a cap on openness in relation to GDP and increasing the weight of financial openness. Additional work also focused on the role of intra-currency union flows.
<b>Variability</b>	It is intended to measure a member's vulnerability to balance of payments shocks and therefore its potential need for Fund financing.	Questions have been raised regarding the extent to which it captures what is intended.	Staff has conducted extensive technical analysis on whether variability captures a member's vulnerability to balance of payments shocks and therefore its potential need for Fund financing but has failed to find a significant relationship between variability and use of Fund resources. This work has also highlighted the high correlation between openness and variability and the potential that this measure can introduce instability and produce counterintuitive results. There was considerable support for dropping variability from the formula. Some conditioned this support on other elements of an integrated reform package, including how its weight is reallocated and the adequacy of measures to protect the poorest members. Some continued to see a role for variability. Alternative measures were explored but no superior measure could be identified.
<b>Reserves</b>	It is viewed as an indicator of a member's financial strength and ability to contribute to the Fund's finances.	There were questions on its relevance and the potential distortions associated with excess reserve accumulation.	Views remained divergent on whether reserves should be maintained at their current level, adjusted or eliminated.
<b>Compression</b>	It helps moderate the influence of size on the quota formula.	There were questions on whether it should be maintained at its current level, adjusted or eliminated.	Views remained divergent on whether compression should be maintained at its current level, adjusted or eliminated. One view was that the current compression factor had been a difficult compromise that should not be reopened, while others favored increasing the level of compression to give greater voice to small countries and EMDs as a group.
<b>Voluntary Financial Contributions</b>	N/A	N/A	A further issue explored was the scope for including a measure of actual financial contributions in the formula. Staff has done considerable work on how to capture the different forms of members' financial contributions to the Fund (see Supplement 1, Annex III for an update of this analysis). Views diverged on the merits of including such a measure in the formula, or on taking account such contributions in distributing quota increases.

## Appendix III. Lists of Under-Represented Members Under Illustrative Formulas

This Appendix presents the lists of under-represented countries under three formulas (current formula, Formula 1.2, and Formula 3.2c) and under all 37 formulas.

**Table III.1: List of Members Under-represented Under Three Formulas**  
(Current, 1.2, and 3.2c)  
(Countries ranked by AQS<sup>1/</sup>)

1. China	12. Philippines	23. Qatar	34. Jordan	45. Armenia
2. India	13. Egypt	24. Sri Lanka	35. Ethiopia	46. Burkina Faso
3. Korea	14. Israel	25. Oman	36. Estonia	47. Lao P.D.R.
4. Switzerland	15. Romania	26. Kenya	37. Bolivia	48. Mongolia
5. Turkey	16. Chile	27. Myanmar	38. Turkmenistan	49. Djibouti
6. Indonesia	17. Peru	28. Dominican Republic	39. Paraguay	50. Maldives
7. Poland	18. Kazakhstan	29. Lithuania	40. Cambodia	51. Bhutan
8. Thailand	19. Vietnam	30. Guatemala	41. Nepal	
9. Nigeria	20. Bangladesh	31. Azerbaijan	42. Mauritius	
10. United Arab Emirates	21. Morocco	32. Panama	43. North Macedonia	
11. Czech Republic	22. Angola	33. Costa Rica	44. Albania	

(Countries ranked by average relative OOL<sup>1/</sup>)

1. Maldives	12. Turkmenistan	23. Switzerland	34. Azerbaijan	45. Kenya
2. Vietnam	13. Paraguay	24. Philippines	35. Israel	46. Romania
3. Mongolia	14. Djibouti	25. Dominican Republic	36. Costa Rica	47. North Macedonia
4. China	15. Lao P.D.R.	26. Jordan	37. Czech Republic	48. Burkina Faso
5. Qatar	16. Thailand	27. Lithuania	38. Egypt	49. Nigeria
6. Ethiopia	17. Mauritius	28. Estonia	39. Poland	50. Armenia
7. Cambodia	18. Indonesia	29. Turkey	40. Angola	51. Albania
8. Nepal	19. Panama	30. Kazakhstan	41. Peru	
9. Bangladesh	20. Oman	31. Guatemala	42. Myanmar	
10. United Arab Emirates	21. Bolivia	32. Sri Lanka	43. Morocco	
11. Bhutan	22. India	33. Korea	44. Chile	

Source: Finance Department.

1/ First from top to bottom, then from left to right.

**Table III. 2: List of Members Under-Represented Under All 37 Formulas**  
(Countries ranked by AQS<sup>1/</sup>)

1. China	9. Philippines	17. Qatar	25. Panama	33. Nepal
2. India	10. Egypt	18. Sri Lanka	26. Costa Rica	34. Mauritius
3. Korea	11. Israel	19. Oman	27. Jordan	35. Lao P.D.R.
4. Turkey	12. Peru	20. Myanmar	28. Ethiopia	36. Mongolia
5. Indonesia	13. Kazakhstan	21. Dominican Republic	29. Bolivia	37. Maldives
6. Poland	14. Vietnam	22. Lithuania	30. Turkmenistan	38. Bhutan
7. Thailand	15. Bangladesh	23. Guatemala	31. Paraguay	
8. United Arab Emirates	16. Morocco	24. Azerbaijan	32. Cambodia	

(Countries ranked by average relative OOL<sup>1/</sup>)

1. Maldives	9. Cambodia	17. Panama	25. Guatemala	33. Azerbaijan
2. Vietnam	10. United Arab Emirates	18. India	26. Turkey	34. Lithuania
3. China	11. Paraguay	19. Bolivia	27. Jordan	35. Myanmar
4. Ethiopia	12. Bhutan	20. Philippines	28. Korea	36. Poland
5. Mongolia	13. Lao P.D.R.	21. Dominican Republic	29. Israel	37. Peru
6. Qatar	14. Turkmenistan	22. Mauritius	30. Kazakhstan	38. Morocco
7. Nepal	15. Indonesia	23. Oman	31. Costa Rica	
8. Bangladesh	16. Thailand	24. Sri Lanka	32. Egypt	

Source: Finance Department.

1/ First from top to bottom, then from left to right.