

**FOR  
AGENDA**

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March 5, 2010

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

From: The Secretary

Subject: **Fourteenth General Review of Quotas—Realigning Quota Shares—Initial Considerations**

Attached for consideration by the Committee of the Whole is a paper on the Fourteenth General Review of Quotas—Realigning Quota Shares: Initial Considerations, which is tentatively scheduled for discussion on **Monday, March 22, 2010**. Issues for discussion appear on page 17.

Questions may be referred to Mr. Krueger (ext. 36854) and Ms. Bassett (ext. 34621) in FIN.

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\*This paper, which was inadvertently issued as SM/10/55 (3/4/10), is being reissued to reflect the correct document series. The content of the paper is unchanged.



INTERNATIONAL MONETARY FUND

**Fourteenth General Review of Quotas—Realigning Quota Shares: Initial  
Considerations**

Prepared by the Finance Department

In consultation with other Departments

Approved by Andrew Tweedie

March 4, 2010

I. Introduction .....	3
II. Data and Quota Formula Issues .....	4
A. Data Issues .....	4
B. Quota Formula and the Role of Members' Contributions.....	6
III. Realigning Quota Shares.....	7
A. Targeted Shift in Quota Share.....	8
B. Shift in Quota Share to EMDCs as a Group.....	8
C. Dynamic EMDCs .....	10
D. Protecting the Voting Share of the Poorest Members.....	13
IV. Illustrative Simulations .....	14
V. Issues for Discussion.....	17
Tables	
1. Distribution of Quotas and Calculated Quotas .....	6
2. Under- and Over-represented Countries by Major Country Groups .....	9
3. Alternative Approaches to Capturing Dynamism.....	12
4. Alternative Lists of Poor Countries .....	14
5. Illustrative Scenarios: Selective Increases of 50%, 100% and 150%.....	18
6. Illustrative Scenarios: Ad hoc Increase to All Under-represented Countries .....	19
7. Illustrative Scenarios: Ad hoc Increase to All Under-represented Countries and Other Dynamic EMDCs.....	20
8. Illustrative Scenarios: Ad hoc Increase to Dynamic EMDCs.....	21
9. Illustrative Scenarios: Ad hoc Increase to All Under-represented Countries and Other Dynamic EMDCs.....	22
10. Illustrative Scenarios: Ad hoc Increase to Dynamic EMDCs.....	23

11. Illustrative Scenarios: Equiproportional, Selective and Ad hoc Increase.....	24
12. Illustrative Scenarios: Equiproportional, Selective and Ad hoc Increase.....	25

*“... we support a shift in quota share to dynamic emerging market and developing countries of at least five percent from over-represented to under-represented countries using the current quota formula as a basis to work from. We are also committed to protecting the voting share of the poorest members.”*

IMFC Communiqué, Istanbul, October 2009

## I. INTRODUCTION<sup>1</sup>

### 1. **Realigning quota shares is central to reform of Fund governance.**

Dissatisfaction with the distribution of quota and voting shares—in particular the view that they no longer capture the growing role and importance of emerging market and developing countries (EMDCs)—is widely seen as undermining the Fund’s effectiveness and legitimacy. In response, an initial reform was launched in 2006 focused on realigning quota and voting shares. The reform package agreed in early 2008 included a new quota formula, an aggregate shift in quota shares totaling almost 5 percentage points for 54 members (mainly EMDCs), a 2.7 percent increase in voting share of EMDCs as a whole, a tripling of basic votes, and an additional Alternate Executive Director for the largest member constituencies, currently the two Sub-Saharan African chairs. The 2008 reform was seen as a first step and it was agreed that future general quota reviews, beginning with the 14<sup>th</sup> Review, would aim at further adjustments in quota shares to ensure that they reflect evolving economic weights.<sup>2</sup>

2. **The changes in quota and voting shares agreed under the 2008 reform are not yet in place.** While the reform received overwhelming approval from nearly all Governors in April 2008, by early March 2010 only 65 members representing about 70 percent of the total voting power had implemented the necessary steps to make the reform effective, well short of the required three-fifths of members (112) having 85 percent of the total voting power. Remaining members are strongly encouraged to move forward with the necessary approvals, so that the 2008 reform can be put in place as quickly as possible.

3. **Notwithstanding the changes agreed as part of the 2008 reform, dissatisfaction persists.** As part of the multilateral response to the global financial crisis, the IMFC called in April 2009 to bring forward the deadline for completing the 14<sup>th</sup> Review by

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<sup>1</sup> Prepared by a staff team led by S. Bassett and comprising S. Williams, H. Treichel, C. Janada, H. Lin, R. Rozenov, L. Kohler, S. Rodriguez, A. Dabney, B. Wennerholm, P. Ganesh, and N. Velikova. T. Krueger and S. Prowse (all FIN) also contributed.

<sup>2</sup> *Report of the Managing Director to the International Monetary and Financial Committee on IMF Quota and Voice Reform (SM/08/105, 4/8/2008).*

two years to January 2011. The IMFC noted at the time that the review is expected to result in increases in the quota shares of dynamic economies, particularly the share of EMDCs as a whole. After its more recent meeting in Istanbul, the IMFC stated that quota reform is crucial for increasing the legitimacy and effectiveness of the Fund and provided important guidance for the quota realignment, as noted in the above quote from its Communiqué. Similarly, the Executive Board stressed in its September 2009 report to the IMFC on governance reform that the effectiveness of many reforms hinges on a satisfactory realignment of quota shares.<sup>3</sup>

4. **This paper provides the basis for an initial discussion by the Committee of the Whole on this topic.** It seeks to identify some key issues that will need to be resolved in arriving at a proposal that can command broad support from the membership. It also presents a set of simulations that seek to illustrate some of the trade-offs involved. No proposals are advanced at this stage, pending further guidance by Directors on the goals of the realignment and finalization of the data set for the review (see next section).

5. **As noted, realignment of quota shares is part of the broader reform of Fund governance.** Other elements include the IMFC, the role and composition of the Executive Board, management selection, and the Fund's mandate. Work will progress in parallel on these other elements, which could ultimately be decided on as part of a wider package. In addition, a key issue to be decided in the 14<sup>th</sup> Review is the size of the quota increase needed to ensure that the Fund has sufficient permanent resources to meet members' needs. A separate paper, to be issued shortly, will facilitate an initial discussion on that topic.

6. **The timeframe for completing the 14<sup>th</sup> Review is very tight.** To meet the January 2011 deadline, considerable progress will need to be made towards narrowing the major areas of difference by the 2010 Annual Meetings, which in turn suggests a need for an intensive work program over the summer months.

## II. DATA AND QUOTA FORMULA ISSUES

### A. Data Issues

7. **The current data set for quota calculations covers the period through 2007.**<sup>4</sup> Staff has initiated work on updating the data set through 2008, with a view to issuing an update paper as soon as possible after the Spring Meetings. The compressed schedule will be facilitated in part by focusing in the first instance on the existing quota variables. As in the past, the new data set will use IFS as the primary source and will employ a common cut-off date for data revisions of end-January 2010. It is expected that the 2008 data set will provide the basis for discussions aimed at concluding the 14<sup>th</sup> Review within the agreed deadline.

<sup>3</sup> *Executive Board Report to the IMFC on Reform of Fund Governance* (IMFC/Doc/20/09/7, 10/3/09).

<sup>4</sup> See *Quotas—Updated Calculations and Quota Variables* (SM/09/227, 8/28/09).

8. **Given the tight timeframe, this paper seeks to provide an early sense of the potential impact of the data update.** For this purpose, staff has derived a set of calculated quota shares through 2008 using the October 2009 WEO rather than IFS as the primary source. The WEO-based projections should provide a reasonable approximation of the future IFS-based data base at an aggregate level and for many countries, but these estimates should nonetheless be treated with considerable caution. In addition to not capturing recent data revisions, the derived data set is based on a different and less comprehensive data source and there are conceptual differences for net capital flows (particularly the treatment of exceptional financing transactions, which are excluded for quota purposes) and for some other elements of the balance of payments (e.g., income, transfers and the capital account, where the WEO data are net whereas both the credit and debit sides are used for quota data). In view of these differences, two data sets were constructed covering the periods through 2007 and 2008,<sup>5</sup> and the differences were applied to the current quota data set to obtain a set of derived calculated quota shares through 2008.

9. **This derived data set suggests that EMDCs as a group can be expected to gain calculated quota share as a result of the 2008 data update** (Table 1).<sup>6</sup> Based on the methodology used in this paper, the increase could be on the order of 1.7 percentage points;<sup>7</sup> all major sub-regions within the EMDC group gain share, with the largest increases recorded by Asia and the transition countries. There is a corresponding decline in the aggregate share of major advanced economies. There could also be significant changes for some individual countries. However, as noted, such changes, including in members' relative economic positions, will only be confirmed once the 2008 data set is finalized.

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<sup>5</sup> To avoid significantly understating some components of the balance of payments, IFS data were used for these elements, although this meant less complete country coverage. The standard gap-filling approach for missing data was not used—for cases where data were missing for 2008, the previous period was used. Data were downloaded for the entire period (1994-2008) to capture data revisions.

<sup>6</sup> Individual country details on calculated quota shares and out-of-lineness are provided in the Statistical Appendix.

<sup>7</sup> Mainly reflecting on-going growth differentials, the shift in shares continues a trend already evident in the previous data update from 2005 to 2007. The 2008 data reflect the initial impact of the global crisis, but the effects on the quota database are dampened by the use of a 3-year average for GDP. In addition, growth in 2008 slowed in both advanced economies and EMDCs at broadly the same pace, leaving the growth differential between the two groups largely unchanged.

**Table 1. Distribution of Quotas and Calculated Quotas  
(In percent)**

	Quota Shares 1/		Calculated Quota Shares	
	Actual	Post Second Round 2/	Current 3/ 4/	Projected 3/ 5/
Advanced economies	60.5	60.5	60.4	58.7
Major advanced economies	45.2	45.3	45.0	43.3
Of which: US	17.1	17.7	17.8	16.9
Other advanced economies	15.3	15.1	15.4	15.5
Emerging Market and Developing Countries	39.5	39.5	39.6	41.3
Developing countries	32.1	32.4	32.6	33.7
Africa	5.4	4.9	3.1	3.2
Asia 6/	11.5	12.6	17.2	18.0
Middle East, Malta & Turkey	7.6	7.2	5.4	5.5
Western Hemisphere	7.6	7.7	6.9	7.0
Transition economies	7.4	7.1	7.0	7.5
Total	100.0	100.0	100.0	100.0
Memorandum Items:				
EU 27	32.4	31.9	32.1	31.7
LICs (PRGT-eligible countries)	4.6	4.3	2.5	2.6

Source: Finance Department.

1/ Includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective.

3/ Based on the following formula:  $CQS = (0.50 \cdot GDP + 0.30 \cdot Openness + 0.15 \cdot Variability + 0.05 \cdot Reserves) \cdot K$ . GDP blended using 60 percent market and 40 percent PPP exchange rates. K is a compression factor of 0.95.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

## **B. Quota Formula and the Role of Members' Contributions**

10. **The calculated quota shares presented in this paper are based on the new quota formula.**<sup>8</sup> In the previous paper (SM/09/227), staff took stock of the range of open issues with the formula and the scope for addressing them as part of the 14<sup>th</sup> Review in light of data and other constraints. Directors generally acknowledged that data constraints precluded refinements in some areas at this time, and many considered that further work on the quota formula within the short timeframe available for completing the 14<sup>th</sup> Review would

<sup>8</sup> The new quota formula is a weighted average of GDP, openness, variability, and reserves (for details, see footnote 3 of Table 1).



not be productive.<sup>9</sup> Given this and the subsequent guidance provided by the IMFC (see below), further work on the formula is not proposed in this paper.

11. **In the September meeting, a number of Directors stressed the linkages between increases in quota shares and members' financial contributions to the Fund.** Requests were also made for information on members' contributions. In response, the Supplement to this paper summarizes various channels through which members contribute financially to the Fund. As discussed in that supplement:

- *Members' financial contributions to the Fund come in a wide variety of forms, reflecting the cooperative nature of Fund membership.* These include voluntary bilateral and multilateral support for Fund liquidity in the GRA, loan and subsidy contributions to the PRGT and its predecessors, contributions for debt relief operations, voluntary SDR trading arrangements, and financial support for other Fund activities, such as technical assistance and training. Contributions are also mandated by Fund policies (e.g., FTP participation, charges and fees associated with borrowing from the Fund, and burden-shared contributions).
- *Members' capacity and willingness to contribute have long been recognized as relevant when determining quota increases.* However, while some elements of the formula can be viewed as capturing members' potential to contribute, actual contributions have been taken into account outside of the formula, and mainly in recognition of cases of particularly generous contributions. Difficult measurement and aggregation issues would need to be addressed if there was a wish to capture members' actual financial contributions on a more systematic basis.

### III. REALIGNING QUOTA SHARES

12. **At the 2009 Annual Meetings, the IMFC provided important guidance on the outcome of the reform.** Following a call by G-20 leaders, the IMFC supported a shift in quota share to dynamic EMDCs of at least five percent from over-represented countries to under-represented countries using the current formula as the basis to work from. It also indicated that it is committed to protecting the voting share of the poorest members.<sup>10</sup> This section discusses some of the issues raised by this guidance, with the aim of seeking Directors' views on the way forward.

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<sup>9</sup> Acting Chair's Summing Up, *Quotas—Updated Calculations and Quota Variables* (BUFF/09/151, 9/15/09).

<sup>10</sup> *Communiqué of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund* (Press Release No. 09/347, 10/ 4/09).

### A. Targeted Shift in Quota Share

13. **The IMFC called for a shift in quota share to dynamic EMDCs of at least 5 percent from over-represented to under-represented countries.** This shift would come on top of the 2008 reform, which as noted resulted in a 2.7 percent increase in voting share of EMDCs as a whole. In subsequent discussions, it has become clear that not all members interpret the minimum 5 percent shift in the same way, with some emphasizing a shift of at least 5 percent to dynamic EMDCs while others underline more the shift from over- to under-represented countries. In principle, these two positions can be reconciled. EMDCs account for the major part of the aggregate shortfall of under-represented countries (using the current 2007 database and based on the derived data set through 2008—see Table 2). Thus, a reform that makes substantial progress in closing the overall gap between actual and calculated quota shares would also be expected to result in a sizable increase in share for dynamic EMDCs.

14. **Nonetheless, these two groups are not identical.** Some advanced countries are under-represented, not all EMDCs that are viewed as dynamic may be currently under-represented, and protecting the voting share of the poorest countries may reduce the aggregate shift from over- to under-represented countries. Thus, judgments will be needed as to the relative emphasis to be placed on these objectives. The simulations below illustrate some options for achieving sizable shifts in quota share both to dynamic EMDCs and from over- to under-represented countries.

### B. Shift in Quota Share to EMDCs as a Group

15. **A related issue involves the shift to EMDCs as a group.** In the lead up to Istanbul, proposals to target a specific shift for EMDCs as a whole did not achieve a sufficiently broad consensus, with some arguing that such a shift should be an outcome rather than a target of the reform. This compares with the approach being followed by the World Bank, which is targeting at least a 3 percent increase in voting share for developing and transition countries as a whole (a group which is identical to the Fund's EMDCs), on top of the 1.46 percent increase in the first phase of its reform.<sup>11</sup> The IMFC guidance suggests that both over-represented EMDCs (except for the poorest) and over-represented advanced countries would be expected to contribute to the adjustment in shares, such that the net increase in share for EMDCs could be less than 5 percent.

16. **Indeed, a sizable realignment is possible with little net increase in EMDC share.** Simulations illustrating this possibility were presented in September (SM/09/227), where the overall increase was distributed on a selective basis using the quota formula. While this resulted in a substantial shift toward individual under-represented countries, most of

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<sup>11</sup> *Development Committee Communiqué* (DC/U/09/2, 10/5/09).

which are EMDCs, the shift to EMDCs as a group was minimal. This reflects the fact that, based on 2007 data, the quota share of EMDCs as a whole is broadly in line with their calculated quota share. The picture would change somewhat assuming EMDCs gain calculated quota share as a result of the 2008 data update, but the overall degree of under-representation seems likely to remain relatively limited.

17. **The potential shift in shares between major country groups can be further illustrated by Table 2.** Using the derived 2008 data set, advanced countries as a group are over-represented by 1.7 percentage points, while total out-of-lineness amounts to 10.8 percentage points; of this total, over-represented advanced countries account for 3.6 percentage points and over-represented EMDCs for the remainder. This suggests that, based on the 2008 data set, a net shift to EMDCs of 1.7-3.6 percentage points could be possible, but increases above 1.7 percent would require that some under-represented advanced countries forego part of the increase to which they would otherwise be entitled to and/or some over-represented advanced countries become under-represented following the adjustments. Both elements played a role in the 2008 reform: some under-represented advanced countries accepted smaller increases to facilitate the overall agreement, and a number of countries moved from over- to under-represented. Of the 13 countries that became under-represented as a result of the ad hoc increases under the 2008 reform, 12 were EMDCs.<sup>12</sup>

**Table 2. Under- and Over-represented Countries by Major Country Groups 1/**  
(In percentage points)

	Data Ending 2007 2/			Data Ending 2008 3/		
	Post Second Round	Calculated	Difference 4/	Post Second Round	Calculated	Difference 4/
	Quota Share	Quota Share		Quota Share	Quota Share	
<b>Advanced economies</b>	<b>60.5</b>	<b>60.4</b>	<b>0.0</b>	<b>60.5</b>	<b>58.7</b>	<b>-1.7</b>
Underrepresented	32.9	35.2	2.3	17.1	19.0	1.9
Overrepresented	27.5	25.2	-2.3	43.4	39.8	-3.6
<b>Emerging Market and Developing Countries</b>	<b>39.5</b>	<b>39.6</b>	<b>0.0</b>	<b>39.5</b>	<b>41.3</b>	<b>1.7</b>
Underrepresented	18.2	25.9	7.7	20.7	29.7	8.9
Overrepresented	21.3	13.7	-7.6	18.8	11.6	-7.2
<b>Total Underrepresented Countries</b>	<b>51.1</b>	<b>61.1</b>	<b>9.9</b>	<b>37.8</b>	<b>48.6</b>	<b>10.8</b>
<b>Total Overrepresented Countries</b>	<b>48.9</b>	<b>38.9</b>	<b>-9.9</b>	<b>62.2</b>	<b>51.4</b>	<b>-10.8</b>
Memorandum Items:						
LICs (PRGT-eligible countries)	4.3	2.5	-1.7	4.3	2.6	-1.6
Underrepresented	0.5	0.6	0.1	0.3	0.4	0.1
Overrepresented	3.8	2.0	-1.8	4.0	2.2	-1.8

Source: Finance Department.

1/ Under- and over-represented countries for the two datasets, respectively.

2/ Based on IFS data through 2007 as in SM/09/227.

3/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

4/ Difference between calculated quota shares and post-second round actual quota shares.

<sup>12</sup> The extent of under-representation for most of these countries after the reform was relatively modest, with the largest being 11.5 percent in the case of Angola.

### C. Dynamic EMDCs

18. **Different approaches to capturing the concept of dynamic EMDCs are possible.** One approach would be to equate dynamism with under-representation using the quota formula. However, this may be too constraining as some countries that are widely viewed as dynamic may be over-represented or not significantly under-represented using the formula. This possibility was recognized in the 2008 reform when additional increases were granted to three countries whose quota shares were most out-of-line in terms of PPP GDP.<sup>13</sup> This was seen as a means of bringing forward expected growth for countries whose dynamism was not yet fully reflected in their calculated quota shares, which are based on historical data.

19. **A number of alternative approaches to capturing dynamism could be explored, including the following:**

- *Above-average growth:* One approach would be to consider countries that have recorded above average growth, or exceeded the average by a certain margin, over a recent period of, say, 5 or 10 years. The period chosen would need to be long enough to capture more than just a short burst of unsustainably strong growth or a temporary rebound from a crisis. On the other hand, several EMDCs have been affected by crises at some point in the last decade, and choosing too long a period could also distort the results. Staff has examined a range of possibilities (described in more detail in the Supplement). Overall, the results are quite sensitive to the chosen time period and the threshold for defining growth as above average (in general, EMDCs grow faster than advanced countries, suggesting that if a criterion is to be used to capture EMDCs with particularly strong growth, average growth for EMDCs rather than global growth may be the most relevant threshold);
- *Contributions to global growth:* A second option would be to consider those EMDCs that have made the strongest contribution to PPP-weighted real global GDP growth over a recent period. This option was considered in the context of the 2008 reform but not pursued.<sup>14</sup> While it generates a more stable list, it primarily captures size and therefore excludes even very fast-growing smaller economies from the group.
- *Out-of-lineness in terms of PPP GDP:* A third option would be to consider those countries whose share in global PPP GDP is larger than their quota share. As noted, in the 2008 reform such an approach was seen as giving additional

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<sup>13</sup>See *Quota and Voice Reform—Key Elements of a Potential Package of Reforms* (SM/08/62, 2/26/08).

<sup>14</sup> See *Quota and Voice Reform—Stocktaking and Further Considerations* (SM/07/252, 7/11/07).

recognition to dynamism by bringing forward expected growth for those countries that are most out-of-line in terms of PPP GDP.<sup>15</sup> On that occasion, only countries whose PPP GDP shares were substantially larger than their quota shares (ratio of more than 1.75) were considered, as the objective was to provide a further boost to a very small group of countries that were most out-of-line by this measure. Alternative thresholds could be considered for the 14<sup>th</sup> Review, including a longer list of countries with shares in global PPP GDP above their quota shares.

20. **These three approaches are illustrated in Table 3 using the derived database through 2008** (see the Supplement, Chapter II for a more extensive discussion). The approaches capture dynamism, respectively as: (i) EMDCs with average growth rates during 2004-08 above the average for EMDCs as a whole; (ii) EMDCs whose contribution to global PPP growth in 2004-08 exceeded 0.5 percent; and (iii) EMDCs whose share in global PPP GDP exceeded their quota share. In each case, countries are included in the list if they meet the defined criteria and are not substantially over-represented using the quota formula (defined here as over-representation of less than 25 percent). Other thresholds and parameters could also be considered (see Supplement, Chapter II). The different approaches shown here capture between 20-33 countries (4 countries—China, India, Peru, and Vietnam—meet all three criteria, while 21 countries meet at least two of the three). Most of the countries in these groups are already under-represented using the quota formula, but a small number of over-represented countries (between 3 and 6) would be added to the list using these criteria.

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<sup>15</sup> See *Quota and Voice Reform—Key Elements of a Potential Package of Reforms* (SM/08/62, 2/26/08).

**Table 3. Alternative Approaches to Capturing Dynamism 1/**

PPP GDP 2/	Contribution 3/	Growth 4/
1 Albania	Brazil	Angola
2 Angola	* China	Azerbaijan
3 Azerbaijan	Colombia	Belarus
4 Belarus	Egypt	Bhutan
5 Bhutan	* India	Cambodia
6 Botswana	Indonesia	Chad
7 Brazil	Iran	* China
8 Cambodia	Korea	Equatorial Guinea
9 * China	Malaysia	Ethiopia
10 Colombia	Mexico	* India
11 Dominican Republic	Pakistan	Jordan
12 Ecuador	* Peru	Kazakhstan
13 Egypt	Philippines	Latvia
14 Equatorial Guinea	Poland	Panama
15 Estonia	Romania	* Peru
16 Ethiopia	Russia	Qatar
17 Guatemala	Singapore	Slovak Republic
18 * India	Thailand	Turkmenistan
19 Indonesia	Turkey	Uganda
20 Iran	* Vietnam	United Arab Emirates
21 Kazakhstan		* Vietnam
22 Korea		
23 Lithuania		
24 Mexico		
25 Nepal		
26 Pakistan		
27 * Peru		
28 Philippines		
29 Poland		
30 Russia		
31 Thailand		
32 Turkey		
33 * Vietnam		

Source: Finance Department.

1/ Based on preliminary data through 2008. Shading denotes over-represented countries.

An asterisk in front indicates that the country meets the criteria under all three approaches.

2/ Includes EMDCs whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25 percent.

3/ Includes EMDCs whose contribution to global GDP growth in a recent 5 year period is above 0.5% and not over-represented by more than 25 percent.

4/ Includes EMDCs whose real GDP growth over a 5 year period is above EMDC average and not over-represented by more than 25 percent.

21. **Consideration also needs to be given to how such criteria are used.** One approach is to focus primarily on under-represented countries but to give consideration to adding a small group of over-represented EMDCs that meet one or more of the above criteria for dynamism. This approach is used in the illustrative simulations in the next section. It has the advantage that all under-represented EMDCs would qualify for ad hoc increases, making the results less sensitive to the choice of criteria used to add countries. An alternative would

be to distribute part or all of the ad hoc increases exclusively to the specific countries meeting one or more of the above criteria. However, under such an approach, it may be more difficult to ensure that the size of quota increases for dynamic but over-represented countries is viewed as fair relative to those for under-represented countries that do not meet the criteria.

#### **D. Protecting the Voting Share of the Poorest Members**

22. **Several issues would need to be addressed.** The first is how to define the group of the “poorest” members whose voting share should be protected. One possibility would be to use the list of PRGT-eligibility recently agreed by the Board.<sup>16</sup> This list comprises 71 members (Table 4) with an aggregate post second round quota share of 4.3 percent. An alternative approach would be to use a narrower list, such as the group of 42 countries defined as low income in the IBRD’s World Development Indicators definition (these countries have a post second round quota share of 2.8 percent).<sup>17</sup>

23. **A second issue is the modality for providing protection.** It was agreed in the 2008 reform that the share of basic votes would be maintained as quotas increase, which means that a member’s voting share will remain unchanged as long as its quota share does not change. However, low income countries are over-represented on average, such that they will tend to lose quota and therefore voting share as part of a formula-based realigning of quotas. To avoid this, one option is to provide part of the ad hoc increase to the poorest countries to maintain their quota share. A second option would be a further increase in the ratio of basic votes to total votes over and above that agreed in the 2008 reform. This option would require a further amendment of the Fund’s Articles.

24. **If voting share is protected through ad hoc quota increases, a further issue is whether this should be done individually or for the poorest members as a group.** The latter would allow a realignment of shares within the group of poorest members, though it also would result in a decline in share for many of these countries. In the following simulations, it is assumed that the poorest are defined as in the list of PRGT-eligible countries, with each individual country’s quota share protected.

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<sup>16</sup> *Eligibility to Use the Fund’s Facilities for Concessional Financing* (SM/09/288, 12/11/09).

<sup>17</sup> For operational and analytical purposes, the World Bank’s main criterion for classifying economies is gross national income (GNI) per capita. Economies are divided into different income groups according to 2008 GNI per capita calculated using the World Bank Atlas method: low income (\$975 or less); lower middle income (\$976 - \$3,855); upper middle income (\$3,856 - \$11,905); or high income (\$11,906 or more). See <http://go.worldbank.org/K2CKM78CC0>.

**Table 4. Alternative Lists of Poor Countries**

PRGT - eligible 1/				World Bank Low Income 2/	
1	Afghanistan, Islamic Republic of	43	Mongolia	1	Afghanistan, Islamic Republic of
2	Armenia	44	Mozambique	2	Bangladesh
3	Bangladesh	45	Myanmar	3	Benin
4	Benin	46	Nepal	4	Burkina Faso
5	Bhutan	47	Nicaragua	5	Burundi
6	Bolivia	48	Niger	6	Cambodia
7	Burkina Faso	49	Nigeria	7	Central African Republic
8	Burundi	50	Papua New Guinea	8	Chad
9	Cambodia	51	Rwanda	9	Comoros
10	Cameroon	52	Samoa	10	Congo, Dem. Republic of
11	Cape Verde	53	Sao Tome and Principe	11	Eritrea
12	Central African Republic	54	Senegal	12	Ethiopia
13	Chad	55	Sierra Leone	13	Gambia, The
14	Comoros	56	Solomon Islands	14	Ghana
15	Congo, Dem. Republic of	57	Somalia	15	Guinea
16	Congo, Republic of	58	St. Lucia	16	Guinea-Bissau
17	Cote d'Ivoire	59	St. Vincent and the Grenadines	17	Haiti
18	Djibouti	60	Sudan	18	Kenya
19	Dominica	61	Tajikistan	19	Kyrgyz Republic
20	Eritrea	62	Tanzania	20	Lao, People's Dem. Republic
21	Ethiopia	63	Timor-Leste	21	Liberia
22	Gambia, The	64	Togo	22	Madagascar
23	Georgia	65	Tonga	23	Malawi
24	Ghana	66	Uganda	24	Mali
25	Grenada	67	Uzbekistan	25	Mauritania
26	Guinea	68	Vanuatu	26	Mozambique
27	Guinea-Bissau	69	Vietnam	27	Myanmar
28	Guyana	70	Yemen, Republic of	28	Nepal
29	Haiti	71	Zambia	29	Niger
30	Honduras			30	Rwanda
31	Kenya			31	Senegal
32	Kiribati			32	Sierra Leone
33	Kyrgyz Republic			33	Somalia
34	Lao, People's Dem. Republic			34	Tajikistan
35	Lesotho			35	Tanzania
36	Liberia			36	Togo
37	Madagascar			37	Uganda
38	Malawi			38	Uzbekistan
39	Maldives			39	Vietnam
40	Mali			40	Yemen, Republic of
41	Mauritania			41	Zambia
42	Moldova			42	Zimbabwe

Sources: Finance Department and The World Bank Group.

1/ Includes countries whose annual per-capita GNI falls below a defined poverty line (\$1135 for FY 2010) and do not have substantial and sustained access to international financial markets for an extended period of time. PRGT eligibility is primarily based on International Development Association (IDA) eligibility but there are small country and short-term vulnerability exceptions. See Eligibility to Use the Fund's Facilities for Concessional Financing (SM/09/288, 12/11/09).

2/ Includes countries whose yearly per-capita GNI is \$975 or less. See <http://go.worldbank.org/K2CKM78CC0>.

#### IV. ILLUSTRATIVE SIMULATIONS

25. **This section presents initial simulations that seek to illustrate some of the above issues and trade-offs.** The simulations are intended purely as an aid to the discussions and do not in any way represent staff proposals. All simulations are based on simple allocation rules applied to all countries. It should be recognized, however, that once the principle of ad hoc increases is accepted, these increases can be agreed in any way that is broadly acceptable to the membership. Establishing certain criteria or rules to guide such increases can help facilitate reaching the necessary broad consensus, as in the 2008 reform. However, ad hoc approaches outside of these general criteria are also possible. One recent example was the realignment of the largest quotas in the 9<sup>th</sup> General Review, which was



based on a pre-agreed allocation for the G-7 members as a whole.<sup>18</sup> To show the possible implications of the data update, all simulations are provided for both the current data set and the derived data set through 2008.

26. **Four sets of simulations are presented.**<sup>19</sup> The simulations reflect key elements that have featured, to varying degrees, in previous general quota reviews: (i) selective increases, where the increase in quotas is distributed to all members according to calculated quota shares; (ii) a combination of selective and relatively large ad hoc increases, where the latter are allocated to countries that meet certain specific criteria; (iii) a combination of selective and smaller ad hoc increases; and (iv) a combination of selective, ad hoc, and equiproportional increases, which are allocated in proportion to actual quota shares and thus tend to dampen the impact of a realignment on members that would otherwise lose quota share. The first set of simulations is presented for overall quota increases of 50-150 percent and, to simplify the presentation, the remaining simulations are based on overall increases of 50 percent and 100 percent.

27. **While larger overall increases tend to increase the scope for realigning shares, there is no direct relationship between the two.** A large realignment is possible with a relatively small overall quota increase, if most of it is concentrated on a sub-set of members. For example, in principle it would be possible to achieve a 5 percent shift to a particular target group with an overall increase on the order of 10–30 percent—although such a small increase in overall quotas would not adequately address concerns about the overall adequacy of the Fund’s resources, based on the analysis in the companion paper on the size of the Fund. Equally, a large overall increase need not result in a major realignment if, for example, a significant part is distributed on an equiproportional basis (as has often been the case in previous general reviews). All the simulations presented here are geared toward achieving at least a 5 percent shift to one or both of the groups referenced by the IMFC based on a doubling of total quotas (though in some cases this is only achieved using the 2008 data set).

28. **The first set of simulations shows the impact of distributing all of the increase on a selective basis, i.e., to all members based on the quota formula** (Table 5). This updates the simulations presented in SM/09/227. These simulations show that it is possible with a large enough overall increase to achieve a 5 percent shift from over- to under-represented countries. However, the shift in shares between major country groups would be small, and this approach would not address protection of voting shares for the poorest members. Thus, some element of ad hoc increases would likely be needed.

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<sup>18</sup> See *Ninth General Review of Quotas--Calculation of Proposed Quotas* (EBD/90/91, Revision 4, Supplement 1, 5/15/90), and *Ninth General Review of Quotas - Illustrative Quota Calculations Based on Data Ended 1986* (EB/CQuota/90/1, Supplement 1, 1/9/90).

<sup>19</sup> See the Statistical Appendix for technical details and for individual country results for the simulations.

29. **The second set of simulations combines selective increases with a relatively large ad hoc increase to a broad range of countries.** Three alternative criteria are used for the ad hoc increases: (i) all under-represented countries, which in effect gives an additional boost to the same set of countries that gain from selective increases (Table 6); (ii) all under-represented countries plus other dynamic EMDCs, where the latter are defined as those countries that are out-of-line with their PPP GDP share; i.e., the third option discussed in Section III.C above (Table 7);<sup>20</sup> and (iii) under-represented EMDCs plus other dynamic EMDCs, which would imply foregoing on the part of under-represented advanced countries (Table 8). In all cases, a portion of the ad hoc increases is allocated to PRGT-eligible countries so that each at least maintains its quota share and thus its voting share.

30. **These simulations demonstrate that the provision of a relatively large ad hoc increase can achieve a sizable shift in shares in line with the guidance provided by the IMFC.** The loss in share for over-represented countries tends to be larger in these simulations because they do not participate in the ad hoc increases. One implication of this approach is that there is an increased likelihood of over-represented countries becoming under-represented, and these simulations impose limits to avoid such effects. A similar approach affecting a small number of countries was adopted in the 11<sup>th</sup> General Review.<sup>21</sup> Also, in the simulations where under-represented advanced countries do not participate in the ad hoc increases, a limit is imposed to ensure that they do not lose quota share.

31. **The third set of simulations combines a predominantly selective increase with a relatively small ad hoc increase.** Two variants are presented based on the second and third criteria outlined above for allocating ad hoc increases (i.e., ad hoc allocations to all under-represented countries plus other dynamic EMDCs, or to dynamic EMDCs; see Tables 9–10). In this and the remaining simulations below, part of the ad hoc increases is again allocated to maintaining the quota shares of individual PRGT-eligible countries. These simulations show that, with a relatively small share of the increase allocated on an ad hoc basis (and part of this allocated to PRGT-eligible countries), close to a doubling of quotas would be needed to achieve a 5 percent shift to dynamic EMDCs.

32. **The final set of simulations introduces to the previous scenario an equiproportional increase of relatively modest size by historical standards** (Tables 11–12). While the overall shifts in shares are somewhat smaller, it is still possible, with a doubling of quotas, to achieve 5 percent shifts to the groups benefiting from an ad hoc

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<sup>20</sup> Using the alternative criteria for capturing dynamism discussed in this paper would not significantly affect quota share distributions among the major country groups, but it could have implications for shares of individual members.

<sup>21</sup> See EB/CQuota/97/7, 11/20/1997. As noted, such limits were not applied in the 2008 reform and some countries (mostly EMDCs) became modestly under-represented.

increase under this approach, though this may require relaxing the cap to allow some over-represented countries to become moderately under-represented.

33. **Overall, the simulations presented in this paper illustrate a range of approaches to realigning quota shares.** Many of the simulations achieve a quota shift of at least 5 percentage points to dynamic EMDCs, particularly those using the derived 2008 data set, and a similar shift from over- to under-represented countries. The net increase in share of EMDCs tends to be in the 1-3½ percentage point range. The simulations also lead to a substantial realignment among the largest quotas, with China moving in many cases from the sixth to the third largest quota. Allocating part of the increase on an ad hoc basis seems likely to be needed to achieve these results, though the relative size of the ad hoc increase could vary. If the share of basic votes is left unchanged, part of the ad hoc increases would also need to be allocated to protect the voting share of the poorest, either individually or as a group. Considerable further work will be needed to narrow the range of options, including on the size and qualification criteria for ad hoc increases, the modalities for their allocation, and whether any part of the increase should be distributed on an equiproportional basis.

## V. ISSUES FOR DISCUSSION

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

- How do Directors assess the broad objectives of the reform in light of the direction provided by the IMFC? Do they consider an approach that would seek to achieve a shift in quota shares of at least 5 percent both to dynamic EMDCs and from over- to under-represented countries, as a viable option? What weight should be given to the net outcome for EMDCs as a whole?
- Do they agree that the quota increase should include a combination of selective increases (i.e., increases based on the quota formula) and ad hoc increases? What are their views on the merits of including an equiproportional element as part of the overall increase?
- What are Directors' views on possible approaches to capturing the concept of dynamic EMDCs? Do they agree that this concept could include some countries that are moderately over-represented under the formula, provided they meet certain criteria?
- How do Directors assess the options for protecting the voting share of the poorest members? Should this be achieved through quota adjustments, or should a further increase in the share of basic votes be considered? If the former, should protection be provided for individual members within this group or for the group as a whole? What definition of the "poorest" members should be used for this purpose?

**Table 5. Illustrative Scenarios: Selective Increases of 50%, 100% and 150% 1/  
(In percent)**

	Post Second Round Quota Share 2/	Calculated Quota Share		50%		100%		150%	
		2007 3/	2008 4/	2007 3/	2008 4/	2007 3/	2008 4/	2007 3/	2008 4/
Advanced economies	60.5	60.4	58.7	60.5	59.9	60.4	59.6	60.4	59.4
Major advanced economies	45.3	45.0	43.3	45.2	44.6	45.2	44.3	45.1	44.1
Of which: United States	17.7	17.8	16.9	17.7	17.4	17.7	17.3	17.8	17.2
Other advanced economies	15.1	15.4	15.5	15.2	15.3	15.3	15.3	15.3	15.3
Emerging Market and Developing Countries	39.5	39.6	41.3	39.5	40.1	39.6	40.4	39.6	40.6
Developing countries	32.4	32.6	33.7	32.5	32.8	32.5	33.1	32.5	33.2
Africa	4.9	3.1	3.2	4.3	4.4	4.0	4.1	3.8	3.9
Asia 5/	12.6	17.2	18.0	14.1	14.4	14.9	15.3	15.4	15.9
Middle East, Malta & Turkey	7.2	5.4	5.5	6.6	6.6	6.3	6.3	6.1	6.2
Western Hemisphere	7.7	6.9	7.0	7.4	7.4	7.3	7.3	7.2	7.3
Transition economies	7.1	7.0	7.5	7.1	7.3	7.1	7.3	7.1	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:									
EU 27	31.9	32.1	31.7	31.9	31.8	32.0	31.8	32.0	31.8
LICs (PRGT-eligible)	4.3	2.5	2.6	3.7	3.7	3.4	3.5	3.2	3.3
WB Low-Income countries	2.8	1.5	1.6	2.4	2.4	2.1	2.2	2.0	2.1
Underrepresented countries (shift in p.p.)				3.3	3.6	5.0	5.4	6.0	6.5
Underrepresented EMDCs (shift in p.p.)				2.6	3.0	3.8	4.5	4.6	5.4
Dynamic EMDCs (shift in p.p.) 6/				2.4	3.0	3.6	4.4	4.3	5.3

Source: Finance Department.

1/ The simulations assume a 50, 100 and 150 percent increase of post second round quotas.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Based on IFS data through 2007 as in SM/09/227.

4/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

5/ Including Korea and Singapore.

6/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.

**Table 6. Illustrative Scenarios: Ad hoc Increase to All Under-represented Countries 1/  
(In percent)**

	Post Second Round Quota Share 2/	Calculated Quota Share		0/40/60 3/				0/50/50 3/			
		2007 4/	2008 5/	50%		100%		50%		100%	
				2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/
Advanced economies	60.5	60.4	58.7	59.6	58.2	59.7	58.2	59.6	58.2	59.7	58.2
Major advanced economies	45.3	45.0	43.3	44.7	43.2	44.8	43.2	44.7	43.2	44.8	43.2
Of which: United States	17.7	17.8	16.9	17.8	16.9	17.8	16.9	17.7	16.9	17.8	16.9
Other advanced economies	15.1	15.4	15.5	14.8	15.0	14.9	15.0	14.9	15.0	14.9	15.0
Emerging Market and Developing Countries	39.5	39.6	41.3	40.4	41.8	40.3	41.8	40.4	41.8	40.3	41.8
Developing countries	32.4	32.6	33.7	33.4	34.5	33.3	34.4	33.4	34.5	33.3	34.4
Africa	4.9	3.1	3.2	4.5	4.6	4.5	4.5	4.6	4.6	4.5	4.5
Asia 6/	12.6	17.2	18.0	15.1	15.9	15.8	16.6	15.0	15.8	15.7	16.5
Middle East, Malta & Turkey	7.2	5.4	5.5	6.5	6.6	6.0	6.1	6.5	6.7	6.1	6.2
Western Hemisphere	7.7	6.9	7.0	7.3	7.4	7.1	7.2	7.3	7.4	7.1	7.2
Transition economies	7.1	7.0	7.5	7.0	7.4	7.0	7.4	7.0	7.4	7.0	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:											
EU 27	31.9	32.1	31.7	31.3	31.0	31.4	31.1	31.3	31.0	31.4	31.1
LICs (PRGT-eligible)	4.3	2.5	2.6	4.3	4.3	4.3	4.4	4.3	4.3	4.3	4.4
WB Low-Income countries	2.8	1.5	1.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Underrepresented countries (shift in p.p.)				5.5	6.4	6.8	7.7	5.3	6.2	6.6	7.6
Underrepresented EMDCs (shift in p.p.)				4.2	5.3	5.2	6.4	4.1	5.1	5.1	6.3
Dynamic EMDCs (shift in p.p.) 7/				3.8	5.3	4.8	6.3	3.7	5.1	4.7	6.2

Source: Finance Department.

1/ The simulations assume a 50 and 100 percent increase of post second round quotas. The ad hoc increase is distributed to all members whose calculated quota share is greater than their actual quota share. Countries which would become under-represented as a result of the overall quota increase are capped at their calculated quota share. PRGT-eligible countries receive at least their post second round actual quota share.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Simulations are distributed to members on an equiproportional, selective and ad hoc basis in the proportion of x/y/z, respectively.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

7/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.

**Table 7. Illustrative Scenarios: Ad hoc Increase to All Under-represented Countries and Other Dynamic EMDCs 1/  
(In percent)**

	Post Second Round Quota Share 2/	Calculated Quota Share		0/40/60 3/				0/50/50 3/			
		2007 4/	2008 5/	50%		100%		50%		100%	
				2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/
Advanced economies	60.5	60.4	58.7	59.1	57.8	59.5	58.0	59.4	57.9	59.5	58.0
Major advanced economies	45.3	45.0	43.3	44.6	43.1	44.7	43.2	44.7	43.1	44.7	43.2
Of which: United States	17.7	17.8	16.9	17.7	16.9	17.8	16.9	17.7	16.9	17.8	16.9
Other advanced economies	15.1	15.4	15.5	14.5	14.6	14.8	14.8	14.7	14.7	14.8	14.8
Emerging Market and Developing Countries	39.5	39.6	41.3	40.9	42.2	40.5	42.0	40.6	42.1	40.5	42.0
Developing countries	32.4	32.6	33.7	33.6	34.6	33.4	34.5	33.5	34.5	33.4	34.5
Africa	4.9	3.1	3.2	4.5	4.6	4.5	4.5	4.6	4.6	4.5	4.5
Asia 6/	12.6	17.2	18.0	14.9	15.6	15.8	16.4	15.1	15.6	15.7	16.4
Middle East, Malta & Turkey	7.2	5.4	5.5	6.4	6.6	6.0	6.1	6.5	6.6	6.0	6.2
Western Hemisphere	7.7	6.9	7.0	7.6	7.8	7.1	7.4	7.4	7.7	7.1	7.4
Transition economies	7.1	7.0	7.5	7.4	7.7	7.1	7.6	7.1	7.6	7.1	7.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:											
EU 27	31.9	32.1	31.7	31.0	30.7	31.3	30.9	31.1	30.8	31.2	30.9
LICs (PRGT-eligible)	4.3	2.5	2.6	4.3	4.3	4.3	4.4	4.3	4.3	4.3	4.4
WB Low-Income countries	2.8	1.5	1.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Underrepresented countries (shift in p.p.)				4.5	6.0	6.2	7.4	4.7	5.9	6.1	7.3
Underrepresented EMDCs (shift in p.p.)				3.7	5.3	4.8	6.3	3.7	5.1	4.7	6.2
Dynamic EMDCs (shift in p.p.) 7/				4.3	5.7	5.0	6.6	3.8	5.4	4.9	6.4
Minimum ad hoc increase to dynamic EMDCs				40%	45%	50%	60%	25%	35%	40%	45%

Source: Finance Department.

1/ The simulations assume a 50 and 100 percent increase of post second round quotas. The ad hoc increase is distributed to all under-represented countries and other dynamic EMDCs as defined in footnote 7. Eligible under-represented advanced countries receive a uniform proportionate reduction in out-of-lineness; eligible under-represented EMDCs receive a uniform proportionate reduction in out-of-lineness or the minimum percentage increase above their post selective nominal quota, whichever is higher. Eligible over-represented countries receive the minimum percentage increase above their post selective nominal quota. Countries which would become under-represented as a result of the overall quota increase are capped at their calculated quota share. PRGT-eligible countries receive at least their post second round actual quota share.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Simulations are distributed to members on an equiproportional, selective and ad hoc basis in the proportion of x/y/z, respectively.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

7/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.

**Table 8. Illustrative Scenarios: Ad hoc Increase to Dynamic EMDCs 1/**  
(In percent)

	Post Second Round Quota Share 2/	Calculated Quota Share		0/60/40 3/				0/50/50 3/			
		2007 4/	2008 5/	50%		100%		50%		100%	
				2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/
Advanced economies	60.5	60.4	58.7	58.5	57.2	58.3	57.0	58.4	57.1	58.2	56.9
Major advanced economies	45.3	45.0	43.3	44.4	43.0	44.4	43.0	44.4	43.0	44.4	43.0
Of which: United States	17.7	17.8	16.9	17.7	16.9	17.7	16.9	17.7	16.9	17.7	16.9
Other advanced economies	15.1	15.4	15.5	14.1	14.2	14.0	14.0	14.0	14.1	13.9	13.9
Emerging Market and Developing Countries	39.5	39.6	41.3	41.5	42.8	41.7	43.0	41.6	42.9	41.8	43.1
Developing countries	32.4	32.6	33.7	34.3	35.3	34.4	35.3	34.4	35.3	34.5	35.3
Africa	4.9	3.1	3.2	4.6	4.7	4.5	4.5	4.6	4.6	4.5	4.5
Asia 6/	12.6	17.2	18.0	15.6	16.2	16.3	16.8	15.8	16.2	16.5	16.8
Middle East, Malta & Turkey	7.2	5.4	5.5	6.7	6.8	6.2	6.4	6.6	6.8	6.2	6.3
Western Hemisphere	7.7	6.9	7.0	7.4	7.6	7.4	7.6	7.4	7.7	7.3	7.7
Transition economies	7.1	7.0	7.5	7.2	7.5	7.3	7.7	7.2	7.6	7.3	7.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:											
EU 27	31.9	32.1	31.7	30.6	30.2	30.5	30.1	30.5	30.1	30.4	30.0
LICs (PRGT-eligible)	4.3	2.5	2.6	4.3	4.3	4.4	4.4	4.3	4.3	4.4	4.4
WB Low-Income countries	2.8	1.5	1.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Underrepresented countries (shift in p.p.)				4.5	5.8	5.7	7.1	4.7	5.9	5.9	7.2
Underrepresented EMDCs (shift in p.p.)				4.4	5.7	5.6	6.9	4.7	5.9	5.8	7.1
Dynamic EMDCs (shift in p.p.) 7/				4.6	5.9	5.9	7.2	4.8	6.2	6.2	7.5
Minimum ad hoc increase to dynamic EMDCs				20%	25%	35%	40%	25%	35%	45%	55%

Source: Finance Department.

1/ The simulations assume a 50 and 100 percent increase of post second round quotas. The ad hoc increase is distributed to dynamic EMDCs as defined in footnote 7. Eligible under-represented countries receive a uniform proportionate reduction in out-of-lineness or the minimum percentage increase above their post selective nominal quota as shown above, whichever is higher. Eligible over-represented countries receive the minimum nominal percentage increase above their post selective nominal quota. Countries which would become under-represented as a result of the overall quota increase are capped at their calculated quota share. Under-represented advanced countries receive at least their post second round quota share. PRGT-eligible countries receive at least their post second round actual quota share.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Simulations are distributed to members on an equiproportional, selective and ad hoc basis in the proportion of x/y/z, respectively.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

7/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.

**Table 9. Illustrative Scenarios: Ad hoc Increase to All Under-represented Countries and Other Dynamic EMDCs 1/**  
(In percent)

	Post Second Round Quota Share 2/	Calculated Quota Share		0/87.5/12.5 3/				0/90/10 3/			
		2007 4/	2008 5/	50%		100%		50%		100%	
				2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/
Advanced economies	60.5	60.4	58.7	59.6	58.4	59.7	58.2	59.7	58.8	59.7	58.4
Major advanced economies	45.3	45.0	43.3	44.7	43.5	44.7	43.2	44.8	43.6	44.7	43.3
Of which: United States	17.7	17.8	16.9	17.7	16.9	17.7	16.9	17.7	16.9	17.7	16.9
Other advanced economies	15.1	15.4	15.5	15.0	14.9	15.0	15.0	15.0	15.1	15.0	15.1
Emerging Market and Developing Countries	39.5	39.6	41.3	40.4	41.6	40.3	41.8	40.3	41.2	40.3	41.6
Developing countries	32.4	32.6	33.7	33.2	34.1	33.3	34.3	33.1	33.9	33.2	34.2
Africa	4.9	3.1	3.2	4.7	4.8	4.6	4.6	4.7	4.8	4.6	4.7
Asia 6/	12.6	17.2	18.0	14.4	15.0	15.2	15.9	14.4	15.0	15.1	15.8
Middle East, Malta & Turkey	7.2	5.4	5.5	6.6	6.7	6.2	6.4	6.6	6.7	6.2	6.4
Western Hemisphere	7.7	6.9	7.0	7.5	7.7	7.3	7.4	7.4	7.5	7.3	7.4
Transition economies	7.1	7.0	7.5	7.2	7.5	7.1	7.5	7.1	7.4	7.1	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:											
EU 27	31.9	32.1	31.7	31.3	31.1	31.4	31.0	31.4	31.3	31.4	31.1
LICs (PRGT-eligible)	4.3	2.5	2.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
WB Low-Income countries	2.8	1.5	1.6	2.8	2.8	2.7	2.8	2.8	2.8	2.7	2.8
Underrepresented countries (shift in p.p.)				3.7	4.6	5.4	6.4	3.6	4.5	5.2	6.2
Underrepresented EMDCs (shift in p.p.)				2.9	4.0	4.1	5.3	2.8	3.7	4.0	5.1
Dynamic EMDCs (shift in p.p.) 7/				2.9	4.1	3.9	5.3	2.7	3.7	3.8	5.1
Minimum ad hoc increase to dynamic EMDCs				7%	10%	5%	10%	5%	5%	5%	7%

Source: Finance Department.

1/ The simulations assume a 50 and 100 percent increase of post second round quotas. The ad hoc increase is distributed to all under-represented countries and other dynamic EMDCs as defined in footnote 7. Eligible under-represented advanced countries receive a uniform proportionate reduction in out-of-lineness; eligible under-represented EMDCs receive a uniform proportionate reduction in out-of-lineness or the minimum percentage increase above their post selective nominal quota, whichever is higher. Eligible over-represented countries receive the minimum percentage increase above their post selective nominal quota. Countries which would become under-represented as a result of the overall quota increase are capped at their calculated quota share. PRGT-eligible countries receive at least their post second round actual quota share.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Simulations are distributed to members on an equiproportional, selective and ad hoc basis in the proportion of x/y/z, respectively.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

7/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.



**Table 10. Illustrative Scenarios: Ad hoc Increase to Dynamic EMDCs 1/  
(In percent)**

	Post Second Round Quota Share 2/	Calculated Quota Share		0/87.5/12.5 3/				0/90/10 3/			
		2007 4/	2008 5/	50%		100%		50%		100%	
				2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/
Advanced economies	60.5	60.4	58.7	59.2	58.1	59.0	57.7	59.3	58.4	59.1	57.8
Major advanced economies	45.3	45.0	43.3	44.4	43.4	44.4	43.1	44.5	43.5	44.4	43.1
Of which: United States	17.7	17.8	16.9	17.7	16.9	17.7	16.9	17.7	16.9	17.7	16.9
Other advanced economies	15.1	15.4	15.5	14.7	14.7	14.6	14.6	14.8	14.8	14.7	14.7
Emerging Market and Developing Countries	39.5	39.6	41.3	40.8	41.9	41.0	42.3	40.7	41.6	40.9	42.2
Developing countries	32.4	32.6	33.7	33.6	34.4	33.8	34.8	33.5	34.2	33.7	34.6
Africa	4.9	3.1	3.2	4.7	4.8	4.6	4.6	4.7	4.8	4.6	4.7
Asia 6/	12.6	17.2	18.0	14.7	15.2	15.5	16.2	14.6	15.1	15.4	16.0
Middle East, Malta & Turkey	7.2	5.4	5.5	6.6	6.7	6.3	6.4	6.6	6.7	6.3	6.4
Western Hemisphere	7.7	6.9	7.0	7.5	7.7	7.4	7.5	7.5	7.6	7.4	7.5
Transition economies	7.1	7.0	7.5	7.2	7.5	7.2	7.5	7.2	7.5	7.2	7.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:											
EU 27	31.9	32.1	31.7	31.1	30.9	31.0	30.6	31.2	31.0	31.1	30.7
LICs (PRGT-eligible)	4.3	2.5	2.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
WB Low-Income countries	2.8	1.5	1.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Underrepresented countries (shift in p.p.)				3.6	4.6	5.1	6.3	3.5	4.4	5.0	6.1
Underrepresented EMDCs (shift in p.p.)				3.3	4.3	4.6	5.8	3.1	4.0	4.4	5.6
Dynamic EMDCs (shift in p.p.) 7/				3.4	4.4	4.6	5.9	3.1	4.1	4.4	5.7
Minimum ad hoc increase to dynamic EMDCs				8%	10%	10%	12%	6%	8%	8%	10%

Source: Finance Department.

1/ The simulations assume a 50 and 100 percent increase of post second round quotas. The ad hoc increase is distributed to dynamic EMDCs as defined in footnote 7. Eligible under-represented countries receive a uniform proportionate reduction in out-of-lineness or the minimum percentage increase above their post selective nominal quota as shown above, whichever is higher. Eligible over-represented countries receive the minimum nominal percentage increase above their post selective nominal quota. Countries which would become under-represented as a result of the overall quota increase are capped at their calculated quota share. Under-represented advanced countries receive at least their post second round quota share. PRGT-eligible countries receive at least their post second round actual quota share.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Simulations are distributed to members on an equiproportional, selective and ad hoc basis in the proportion of x/y/z, respectively.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

7/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.

**Table 11. Illustrative Scenarios: Equiproportional, Selective and Ad hoc Increase 1/  
(In percent)**

	Post Second Round Quota Share 2/	Calculated Quota Share		20/70/10 3/				20/72.5/7.5 3/			
		2007 4/	2008 5/	50%		100%		50%		100%	
				2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/
Advanced economies	60.5	60.4	58.7	59.7	58.9	59.3	58.0	59.9	59.1	59.6	58.5
Major advanced economies	45.3	45.0	43.3	44.7	43.7	44.5	42.9	44.9	44.0	44.6	43.3
Of which: United States	17.7	17.8	16.9	17.7	16.9	17.7	16.5	17.7	17.0	17.7	16.7
Other advanced economies	15.1	15.4	15.5	15.0	15.1	14.9	15.1	15.0	15.1	14.9	15.1
Emerging Market and Developing Countries	39.5	39.6	41.3	40.3	41.1	40.7	42.0	40.1	40.9	40.4	41.5
Developing countries	32.4	32.6	33.7	33.1	33.8	33.5	34.5	33.0	33.6	33.3	34.2
Africa	4.9	3.1	3.2	4.8	4.8	4.7	4.7	4.8	4.8	4.7	4.7
Asia 6/	12.6	17.2	18.0	14.2	14.7	14.9	15.6	14.0	14.4	14.8	15.4
Middle East, Malta & Turkey	7.2	5.4	5.5	6.7	6.8	6.5	6.6	6.7	6.8	6.5	6.6
Western Hemisphere	7.7	6.9	7.0	7.5	7.5	7.4	7.6	7.5	7.6	7.4	7.4
Transition economies	7.1	7.0	7.5	7.2	7.3	7.2	7.5	7.1	7.3	7.1	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:											
EU 27	31.9	32.1	31.7	31.3	31.4	31.1	31.1	31.5	31.4	31.3	31.3
LICs (PRGT-eligible)	4.3	2.5	2.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
WB Low-Income countries	2.8	1.5	1.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Underrepresented countries (shift in p.p.)				3.1	3.9	4.7	5.8	2.9	3.5	4.4	5.4
Underrepresented EMDCs (shift in p.p.)				2.4	3.3	3.6	4.9	2.2	2.9	3.4	4.4
Dynamic EMDCs (shift in p.p.) 7/				2.4	3.3	3.6	5.0	2.2	3.0	3.3	4.4
Minimum ad hoc increase to dynamic EMDCs				5%	5%	8%	10%	4%	5%	5%	5%

Source: Finance Department.

1/ The simulations assume a 50 and 100 percent increase of post second round quotas. The ad hoc increase is distributed to all under-represented countries and other dynamic EMDCs as defined in footnote 7. Eligible under-represented advanced countries receive a uniform proportionate reduction in out-of-lineness; eligible under-represented EMDCs receive a uniform proportionate reduction in out-of-lineness or the minimum percentage increase above their post equiproportional and selective nominal quota, whichever is higher. Eligible over-represented countries receive the minimum percentage increase above their post equiproportional and selective nominal quota. PRGT-eligible countries receive at least their post second round actual quota share.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Simulations are distributed to members on an equiproportional, selective and ad hoc basis in the proportion of x/y/z, respectively.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

7/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.

**Table 12. Illustrative Scenarios: Equiproportional, Selective and Ad hoc Increase 1/  
(In percent)**

	Post Second Round Quota Share 2/	Calculated Quota Share		20/70/10 3/				20/72.5/7.5 3/			
		2007 4/	2008 5/	50%		100%		50%		100%	
				2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/	2007 4/	2008 5/
Advanced economies	60.5	60.4	58.7	59.3	58.4	58.7	57.4	59.5	58.8	59.1	58.0
Major advanced economies	45.3	45.0	43.3	44.5	43.6	44.2	42.8	44.7	43.9	44.3	43.2
Of which: United States	17.7	17.8	16.9	17.7	16.9	17.7	16.5	17.7	17.0	17.7	16.7
Other advanced economies	15.1	15.4	15.5	14.7	14.8	14.5	14.6	14.9	14.9	14.7	14.8
Emerging Market and Developing Countries	39.5	39.6	41.3	40.7	41.6	41.3	42.6	40.5	41.2	40.9	42.0
Developing countries	32.4	32.6	33.7	33.5	34.2	34.0	35.1	33.3	33.8	33.7	34.5
Africa	4.9	3.1	3.2	4.8	4.8	4.7	4.7	4.8	4.8	4.7	4.7
Asia 6/	12.6	17.2	18.0	14.3	15.0	15.3	16.1	14.2	14.6	15.0	15.6
Middle East, Malta & Turkey	7.2	5.4	5.5	6.8	6.9	6.6	6.7	6.7	6.8	6.5	6.6
Western Hemisphere	7.7	6.9	7.0	7.6	7.6	7.5	7.6	7.5	7.6	7.5	7.6
Transition economies	7.1	7.0	7.5	7.3	7.4	7.3	7.5	7.2	7.4	7.3	7.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:											
EU 27	31.9	32.1	31.7	31.1	31.1	30.7	30.6	31.3	31.2	31.0	30.9
LICs (PRGT-eligible)	4.3	2.5	2.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
WB Low-Income countries	2.8	1.5	1.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Underrepresented countries (shift in p.p.)				3.0	3.9	4.6	5.8	2.8	3.5	4.2	5.3
Underrepresented EMDCs (shift in p.p.)				2.7	3.7	4.2	5.4	2.5	3.2	3.7	4.8
Dynamic EMDCs (shift in p.p.) 7/				2.8	3.7	4.3	5.5	2.5	3.3	3.8	4.9
Minimum ad hoc increase to dynamic EMDCs				8%	5%	10%	10%	5%	5%	8%	8%

Source: Finance Department.

1/ The simulations assume a 50 and 100 percent increase of post second round quotas. The ad hoc increase is distributed to dynamic EMDCs as defined in footnote 7. Eligible under-represented countries receive a uniform proportionate reduction in out-of-lineness or the minimum percentage increase above their post equiproportional and selective nominal quota as shown above, whichever is higher. Eligible over-represented countries receive the minimum nominal percentage increase above their post equiproportional and selective nominal quota. Under-represented advanced countries receive at least their post second round quota share. PRGT-eligible countries receive at least their post second round actual quota share.

2/ Includes ad hoc increases for 54 eligible members that are not yet effective; also includes Kosovo which became a member on June 29, 2009. For the two countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used.

3/ Simulations are distributed to members on an equiproportional, selective and ad hoc basis in the proportion of x/y/z, respectively.

4/ Based on IFS data through 2007 as in SM/09/227.

5/ Based on preliminary data through 2008 primarily from the World Economic Outlook, October 2009.

6/ Including Korea and Singapore.

7/ Includes all under-represented EMDCs plus other dynamic EMDCs defined as those whose PPP GDP share divided by post second round quota share is greater than 1 and not over-represented by more than 25%.