

I. INTRODUCTION

1. At the Executive Board discussion of quota and voice reform in July, which built upon two earlier informal seminars, Directors highlighted the need to make significant further progress in the coming months.² This would **enable the Executive Board to report concrete and substantial progress to the Board of Governors at the Annual Meetings**. It was envisaged that the period leading up to the Annual Meetings would be used to begin to resolve the remaining areas of difference and focus on the main choices that need to be made. In that vein, staff and management were to consider how the views expressed and guidance provided by Directors so far could be built upon to identify more concretely the scope for specific proposals.

2. **Against this background, the present paper makes a relatively narrow range of proposals for the second round reform package.** These proposals seek to build on the areas of agreement that have emerged to date, and make further progress in bridging the remaining gaps. Given the significant differences of view that persist in some areas, the proposals should be viewed as illustrative rather than definitive, and still leave important choices to be made. The intention is to try to move toward the broad consensus necessary for the reform to achieve its goal of strengthening the effectiveness and credibility of the Fund. Achieving this broad consensus will require a continuation of the spirit of flexibility and compromise that has characterized the discussions since the beginning of the current reforms.

II. TOWARDS CONSENSUS—KEY ISSUES

3. **Important progress has been made in the Board discussions that have taken place since the Annual Meetings in Singapore.** In terms of broad objectives, it has been agreed that a goal is to enhance the representation of dynamic economies, many of which are emerging market countries. There is also a growing recognition that the outcome should be an increase in the voting shares of emerging market and developing countries as a whole. While the main focus continues to be on dynamic economies that have become under-represented, such an approach would be consistent with the view that an outcome that increased their shares at the expense of other emerging market and developing countries may not command the needed broad consensus.

4. **Enhancing the voice and participation of low income countries remains a core goal of the reform.** The Board of Governors Resolution No 61-5 approved in Singapore provides for at least a doubling of basic votes, and at a minimum protecting the voting power of low income countries as a group during the two rounds of ad hoc quota increases. An important issue is whether the goal should be more ambitious with a larger increase in basic votes and some rise in low income country voting share. Also, staffing resources for the offices of Executive Directors with the largest number of members have already been increased, and a staff paper will be circulated soon on the issue of an amendment to the

² *Quota and Voice Reform—Stocktaking and Further Considerations* (2007), and The Chairman’s Summing Up, *Quota and Voice Reform—Stocktaking and Further Considerations* (2007). See also *A New Quota Formula Additional Considerations* (2007), and *Quotas—Further Thoughts on a New Quota Formula* (2006).

Articles that would enable each Executive Director elected by a large number of members to appoint more than one Alternate Executive Director.

5. **Considerable progress has also been made regarding the quota formula itself.** There is agreement that it should be simple and transparent, consistent with the multiple roles of quotas, produce results that are broadly acceptable to the membership, and be feasible to implement statistically. Beyond that, it is generally agreed that the variables in the formula should be limited to updated and modernized versions of the four variables included in the existing formulas—GDP, openness, variability, and reserves. At the same time, it is recognized that there are some areas where alternative approaches have been considered but there is currently insufficient support for change (e.g., the definitions of openness and variability). These will remain issues for further work, as part of the current reform or beyond. And, as discussed below, measurement of GDP remains a key issue.

6. **There has also been a substantial convergence of views on the weights to be given to the quota variables.** It is generally agreed that GDP should be the most important, with openness and variability also playing important roles—though views differ on the relative weights of the latter two variables. There also appeared to be a sense, on balance, that reserves should have a relatively small weight.

7. **On the measurement of GDP, the July discussion revealed considerable support for the view that PPP GDP should play a role in determining the second round quota increases.** The precise nature of that role, however, remains very much open. This issue is closely linked to the question of the calculated quota shares generated by the new formula, and in particular whether the new formula should increase the aggregate calculated quota share of emerging market and developing countries relative to the outcome of the existing quota formulas. There is also an issue of the available data on PPP GDP, which are in the process of being upgraded under the auspices of the International Comparison Program (ICP). Two broad strands appeared to be emerging, around which views were quite divided.

8. **One strand sees a role for PPP GDP in the new quota formula, in order to capture the non-financial roles of quotas.** Recognizing that quotas also have important financial roles, such an approach would seem best facilitated through the use of a GDP blend variable, involving GDP measured at both market exchange rates and at PPP. The relative weights that could be assigned to market rate and PPP GDP in such a variable remain open. However, as the illustrative simulations presented in previous staff papers have demonstrated, it is difficult to generate an outcome that raises the calculated quota share of emerging market and developing countries as a whole without some use of PPP GDP in the formula, probably combined with compression.³

9. **A second strand that emerged in the July discussion would maintain a formula based solely on market rate GDP but add a supplementary filter using PPP GDP.** The

³ As illustrated previously, the use of compression alone can also raise the aggregate calculated quota share of emerging market and developing countries but only if it were applied at a level that, based on discussions to date, may not command the necessary broad support.

aim would be to capture emerging market and developing countries whose weight and role in the world economy have been growing but whose position is not yet fully reflected in the quota formula. In this way, it could be viewed as to some extent anticipating a continuation of current growth trends that will over time be captured in a formula based on market rate GDP. Concerns were expressed at the July discussion that a filter would have only a one-time effect. To address these concerns, the possibility of giving the filter more durability could also be explored. One possible approach would be for the Board of Governors Resolution on the second round reforms to include a commitment that PPP GDP would be taken into account when considering quota adjustments for some time into the future.

10. **Beyond the above four variables, a further open issue remains the potential role for compression in the formula.** Compression does not alter the ranking of members but does narrow the dispersion of calculated quota shares between large and smaller countries. In the July discussion, most Directors favored use of a compression factor as a means of reducing to some degree the influence of economic size in the quota formula. As noted previously,⁴ compression reduces the share of a relatively small group of countries (the seven members with the largest calculated quota shares, of which six are advanced countries), and increases the shares of all other members, both advanced and developing countries. If compression were included, a judgment would need to be made on its level, recognizing that too large a compression factor could make calculated quota shares less reflective of members' relative economic positions.

III. ELEMENTS OF A POSSIBLE APPROACH

11. **In light of the above considerations, this section presents a limited range of proposals aimed at exploring the scope for building the needed broad consensus.** All the proposals below involve some use of PPP GDP, based on the two strands discussed above. They also result in a shift in voting share away from advanced countries as a group and towards emerging market and developing countries.

12. **The proposals are based on several common elements, all of which involve issues that remain open at this stage:**

- **Variable weights:** The proposals all involve a new formula with a 50 percent weight on GDP and a 5 percent weight on reserves. Two alternative proposals are considered for openness and variability: weights of 30–25 percent for openness and 15–20 percent for variability, respectively.
- **Size of the second round:** All the proposals are based on an overall increase (first and second round combined) of 10 percent, implying a second round increase of 8.1 percent. While a range of views have been expressed to date on the appropriate size of the second round, it is not clear at this stage whether a smaller increase would

⁴ *Quotas-Further Thoughts on a New Quota Formula* (2006) (paragraphs 28 and 36 and Figure 1).

allow enough room for a significant realignment of shares or that the necessary broad support exists for a substantially larger increase.

- **Allocation of the second round increases:** The proposals assume that second round increases would be allocated to under-represented members under the new quota formula based on achieving a uniform proportionate reduction in the gap between calculated quota shares and pre-Singapore actual quota shares (this approach is consistent with that followed in the first round). As discussed in *Quota and Voice Reform—Stocktaking and Further Considerations*, this implies that second round increases would be provided to the four members receiving first round increases in Singapore to the extent required to deliver the same overall proportionate reduction in out-of-lineness (under the two rounds) as other under-represented members.⁵ In most scenarios, all under-represented countries are assumed to be eligible for the second round, but a few scenarios are included to illustrate the potential impact of a higher threshold that would concentrate the increases on relatively more out-of-line countries.
- **Foregoing:** The proposals are based on the assumption that major advanced countries would be willing to forego part of the increases to which they would otherwise be entitled. For illustrative purposes only, the proposals assume a common approach for all eligible major advanced countries, recognizing that such countries may decide on a different distribution within the group. Two countries have so far expressed a willingness to forego any increase beyond the level that would restore their pre-Singapore voting shares, and the proposals adopt this assumption for all major advanced countries. As noted in *Quota and Voice Reform—Stocktaking and Further Considerations*, the extent of foregoing can make a significant difference to the adjustment in shares that is possible for any given overall increase. For purely illustrative purposes, the proposals also indicate the sensitivity of the results to a larger degree of foregoing—to post-Singapore rather than pre-Singapore voting shares.
- **Increase in basic votes:** The proposals assume a doubling of basic votes, which for the simulations presented here is sufficient to preserve the pre-Singapore voting share of low income countries. As noted above, however, one open issue is whether to go beyond this objective, and the proposals also illustrate the impact of a tripling in basic votes.

13. **As noted, the proposals explore two broad strands for using PPP GDP to determine ad hoc quota increases in the second round.** The first strand includes PPP GDP as part of a blend variable in the quota formula. While the relevant weights remain open, the proposals presented here assume a blend comprising 75 percent market rate GDP and

⁵ At the July discussion, Directors generally supported such an approach to ensure even-handed treatment across members, though a few Directors noted that, at a minimum, these four members should not lose quota share in the second round.

25 percent PPP GDP. For all of the scenarios presented under this approach, the formula also includes a compression factor of 0.95.

Member Countries Meeting Filter Parameters 1/

| | Linear Formula | | PPP GDP/AQS 4/ |
|-------------------|---------------------------|---------------------------|----------------|
| | 50/30/15/05 2/ CQS/AQS | 50/25/20/05 3/ CQS/AQS | |
| Korea | 2.855 | 2.862 | 2.162 |
| Turkey | 1.957 | 2.050 | 2.055 |
| China 5/ | 1.939 | 1.901 | 5.107 |
| Equatorial Guinea | 1.809 | 1.886 | 1.950 |
| Thailand | 1.384 | 1.403 | 1.784 |
| Turkmenistan | 1.292 | 1.350 | 1.792 |
| Bhutan | 1.061 | 1.088 | 1.639 |
| Vietnam | 1.046 | 1.002 | 2.631 |
| Brazil | 0.994 | 1.029 | 1.849 |
| Philippines | 0.914 | 0.943 | 1.658 |
| India | 0.755 | 0.749 | 3.017 |
| Indonesia | 0.740 | 0.755 | 1.647 |
| Colombia | 0.673 | 0.682 | 1.548 |

Source: Finance Department.

1/ Under the scenarios using a supplementary filter, a member country is eligible for an ad hoc quota increase if it meets the filter and its level of out-of-lineness (calculated quota share over actual quota share, or CQS/AQS) is greater than 0.667 under the specified formula, implying that the member is over-represented by less than 50 percent using its calculated quota share as a base.

2/ $0.5 \times \text{GDP} + 0.3 \times \text{Openness} + 0.15 \times \text{Variability} + 0.05 \times \text{Reserves}$.

3/ $0.5 \times \text{GDP} + 0.25 \times \text{Openness} + 0.2 \times \text{Variability} + 0.05 \times \text{Reserves}$.

4/ The filter (as recently proposed by a participant at a G-20 meeting in Durban) is calculated as the member's average share of global PPP GDP for the three year period ending in 2005 divided by the member's pre-Singapore quota share. PPP data for this filter are from the quota database reported in *Quotas—Updated Calculations and Data Adjustments* (2007). To meet the filter, a member's share of global PPP GDP must exceed its quota share by more than 50 percent (i.e., a ratio greater than 1.5).

5/ Includes China, P.R., and Hong Kong SAR.

14. **The second strand involves use of a formula using solely market rate GDP plus a supplementary filter based on PPP GDP.** The filter is used to add a small number of emerging market and developing countries to the list of countries that are under-represented under the formula in order to determine eligibility for second round increases. Such an approach was discussed in *Quota and Voice Reform—Stocktaking and Further Considerations* and the proposal builds on that approach in two key respects. First, the filter is used only to add countries rather than to also exclude countries from the eligible list. Second, the filter is based on members' shares in global PPP GDP and includes countries whose shares in global PPP GDP are substantially (more than 50 percent) larger than their actual quota shares,⁶ provided they are not substantially over-represented under the relevant

⁶ An approach along these lines was proposed by a participant at the G-20 deputies meeting in Durban on September 8–9. The earlier variant presented in *Quota and Voice Reform—Stocktaking and Further*

(continued)

quota formula (the text table indicates the countries that would meet this filter). In the filter variants considered here, the formula is based on a linear combination of the four quota variables without compression, but the possibility of some use of compression under this approach could also be explored.

15. **Under the filter approach, a decision would be needed on the size of the increases for over-represented countries brought in by the filter.** In the proposals presented here, it is assumed that these countries receive a 5 percent increase over their pre-Singapore voting share. Other metrics could, of course, also be considered. To ensure even-handed treatment vis-à-vis under-represented countries under the formula, it is proposed that under-represented emerging market and developing countries that also meet the filter test would receive an increase of no less than 5 percent over their pre-Singapore voting share.

IV. RESULTS

16. **Table 1 summarizes the results of these proposals in terms of the distribution of calculated quota shares among major country groups** (individual country data are provided in a separate supplement). For the combined formulas (involving both a GDP blend and compression), the aggregate calculated quota share of emerging market and developing countries increases by 1.1 to 1.5 percentage points relative to the outcome of the existing quota formulas, with most sub-groups showing an increase. The increases are somewhat larger in the formula with a higher weight for variability. Conversely, in the formulas with solely market rate GDP and no compression, the share of the same group declines by 3.7 to 4 percentage points.

17. **Table 2 shows the outcomes in terms of voting shares of proposals involving the combined formula approach** (outcomes in terms of actual quota shares are provided in the supplement). All simulations result in a further increase in the aggregate voting share of emerging market and developing countries following the second round, with the largest increases coming from the simulations involving a tripling of basic votes and a greater degree of foregoing.

18. **The results of the filter approach are illustrated in Tables 3–4.** As can be seen, the filter approach results in a shorter list of countries eligible for second round increases and a slightly higher uniform reduction in out-of-lineness for these countries compared with the combined formula approach. In terms of the movement of shares, however, the filter approach shows a similar but slightly smaller increase in the aggregate voting share of emerging market and developing countries.

Considerations (2007) was based on contributions to global growth on a PPP basis. At the July discussion, a number of Directors expressed the view that size should not be a criterion for determining which countries should benefit from the second round, and the proposal in this paper is neutral with regard to size. It also can yield very similar results to a filter based on contributions to growth, though variants of the latter could still be considered further.

19. **As noted, a higher threshold could potentially be used to concentrate the second round increases on under-represented countries that are relatively more out of line.** One such approach, which was proposed at the recent G-20 deputies meeting in Durban and is also shown for illustrative purposes in Table 4, would be to use a threshold ratio for out-of-lineness of 1.1 for countries qualifying for the second round. As can be seen, for the particular formulas shown here, such an approach could again allow a somewhat larger uniform proportionate reduction factor and result in a similar aggregate movement in voting share towards emerging market and developing countries to that resulting from the use of a combined formula and no filter.

20. **Overall, these simulations suggest that the different approaches discussed in this paper for using PPP GDP in the second round can deliver broadly similar results in terms of actual quota and voting shares.** This is true even though the results in terms of calculated quota shares under the two approaches are quite different. Other outcomes are obviously possible by changing the assumptions made in this paper. However, unless there is agreement on a larger overall second round, it would seem that generating significantly more movement in aggregate shares towards emerging market and developing countries would require a change in some key assumptions, such as a greater degree of foregoing on the part of advanced countries, or a different allocation method for the second round that would concentrate more of the increases on emerging market and developing countries.

V. ISSUES FOR DISCUSSION

Directors may wish to comment on:

- The appropriate objectives for the second round reform package.
- The relative merits of the two approaches proposed in the paper—a formula incorporating a blended GDP variable and compression, and the filter approach.
- The desirable weights for variables in the formula, especially the relative weights for openness and variability.
- The appropriate aggregate size of the second round ad hoc quota increase, the mechanism for allocating the increase to eligible members, and the size of the increase in basic votes.

**Table 1. Calculated Quota Shares Based on a Linear Formula 1/ 2/
(In percent)**

| | Actual Quotas 3/ | | Existing Five Formulas | Formulas for Blend and Compression Scenarios | | Formulas for Filter Scenarios | |
|--|------------------------------|-------------------------------|------------------------------|---|---|--|--|
| | Pre First Round Increases | Post First Round Increases | | GDP Blend 50% 4/ | GDP Blend 50% 4/ | GDP 50% | GDP 50% |
| | | | | Openness 30% Variability 15% Reserves 5% K=0.95 5/ | Openness 25% Variability 20% Reserves 5% K=0.95 5/ | Openness 30% Variability 15% Reserves 5% | Openness 25% Variability 20% Reserves 5% |
| Advanced economies | 61.6 | 60.5 | 65.6 | 64.5 | 64.1 | 69.6 | 69.3 |
| Major advanced economies | 46.0 | 45.2 | 45.9 | 48.2 | 48.0 | 53.6 | 53.4 |
| Of which: US | 17.4 | 17.1 | 16.3 | 19.1 | 19.4 | 22.2 | 22.5 |
| Other advanced economies | 15.6 | 15.3 | 19.7 | 16.3 | 16.2 | 16.0 | 15.9 |
| Emerging Market and Developing Countries | 38.4 | 39.5 | 34.4 | 35.5 | 35.9 | 30.4 | 30.7 |
| Developing countries | 30.9 | 32.1 | 28.6 | 29.7 | 30.0 | 25.4 | 25.6 |
| Africa | 5.5 | 5.4 | 2.4 | 2.8 | 2.8 | 2.1 | 2.2 |
| Asia 6/ | 10.3 | 11.5 | 16.2 | 16.1 | 16.1 | 13.7 | 13.7 |
| Middle East, Malta & Turkey | 7.6 | 7.6 | 4.8 | 4.5 | 4.6 | 4.0 | 4.1 |
| Western Hemisphere | 7.5 | 7.6 | 5.2 | 6.3 | 6.4 | 5.5 | 5.7 |
| Transition economies | 7.6 | 7.4 | 5.7 | 5.8 | 5.9 | 5.0 | 5.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Memorandum Items: | | | | | | | |
| EU 27 | 32.9 | 32.4 | 37.8 | 33.1 | 32.5 | 33.9 | 33.3 |
| LICs 7/ | 7.5 | 7.4 | 3.6 | 4.8 | 4.9 | 3.5 | 3.5 |

Source: Finance Department.

1/ Calculated as the sum of variable weights multiplied by a country's shares in the global total of the respective variables.

2/ Based on 1993-2005 data. Reflects the impact of adjustments to current receipts and payments for re-exports, international banking interest, and non-monetary gold.

3/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).

4/ GDP is blended using GDP weighted 75 percent at market exchange rates and 25 percent at PPP exchange rates. PPP data from the quota database reported in *Quotas—Updated Calculations and Data Adjustments* (2007) were retrieved from the WEO database as of January 31, 2007 (converted to SDRs) for 176 countries; for nine countries with no WEO data, PPP GDP was estimated based on the countries' share in global GDP at market rates.

5/ The compression (K) raises the quota formula to the power of K.

6/ Including Korea and Singapore.

7/ PRGF-eligible countries.

Table 2. Second Round Simulation—Illustration of Voting Shares Based on the Combined Formula Approach 1/ 2/ (In percent)

| | Pre First Round Increases | Post First Round Increases | Actual Voting Shares Post Second Round | | | | | | | |
|--|------------------------------|-------------------------------|--|--|---|---|--|--|---|---|
| | | | 50 (75/25)/30/15/5; K=0.95 3/ 4/ | | | | 50 (75/25)/25/20/5; K=0.95 3/ 5/ | | | |
| | | | BV = 500 Foregoing to Pre-Singapore Voting Shares | BV = 750 Foregoing to Pre-Singapore Voting Shares | BV = 500 Foregoing to Post-Singapore Voting Shares | BV = 750 Foregoing to Post-Singapore Voting Shares | BV = 500 Foregoing to Pre-Singapore Voting Shares | BV = 750 Foregoing to Pre-Singapore Voting Shares | BV = 500 Foregoing to Post-Singapore Voting Shares | BV = 750 Foregoing to Post-Singapore Voting Shares |
| Advanced economies | 60.6 | 59.5 | 59.1 | 58.5 | 58.7 | 58.3 | 58.9 | 58.4 | 58.5 | 58.1 |
| Major advanced economies | 45.1 | 44.4 | 43.8 | 43.3 | 43.2 | 43.0 | 43.4 | 43.1 | 43.0 | 42.7 |
| Of which: US | 17.0 | 16.7 | 17.0 | 16.9 | 16.7 | 16.7 | 17.0 | 17.0 | 16.7 | 16.7 |
| Other advanced economies | 15.4 | 15.2 | 15.4 | 15.2 | 15.5 | 15.3 | 15.5 | 15.3 | 15.6 | 15.4 |
| Emerging Market and Developing Countries | 39.4 | 40.5 | 40.9 | 41.5 | 41.3 | 41.7 | 41.1 | 41.6 | 41.5 | 41.9 |
| Developing countries | 31.7 | 32.9 | 33.4 | 33.8 | 33.7 | 34.0 | 33.6 | 34.0 | 33.9 | 34.3 |
| Africa | 6.0 | 5.9 | 5.9 | 6.3 | 5.9 | 6.3 | 5.9 | 6.3 | 5.9 | 6.3 |
| Asia 6/ | 10.4 | 11.6 | 12.4 | 12.3 | 12.7 | 12.5 | 12.6 | 12.4 | 12.8 | 12.7 |
| Middle East, Malta & Turkey | 7.6 | 7.6 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 |
| Western Hemisphere | 7.7 | 7.8 | 7.7 | 7.9 | 7.7 | 7.9 | 7.8 | 7.9 | 7.8 | 7.9 |
| Transition economies | 7.7 | 7.6 | 7.5 | 7.6 | 7.5 | 7.6 | 7.5 | 7.6 | 7.5 | 7.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Memorandum Items: | | | | | | | | | | |
| No. of countries receiving ad hocs | | | 54 | 53 | 54 | 54 | 54 | 53 | 54 | 54 |
| Uniform reduction factor 7/ | | | 33.8 | 30.4 | 38.6 | 33.7 | 36.4 | 32.6 | 40.4 | 36.3 |
| EU 27 | 32.5 | 32.0 | 31.8 | 31.4 | 31.8 | 31.5 | 31.5 | 31.1 | 31.6 | 31.2 |
| LICs 8/ | 8.3 | 8.1 | 8.4 | 9.0 | 8.4 | 9.0 | 8.4 | 9.0 | 8.4 | 9.0 |

Source: Finance Department.

1/ These simulations assume a uniform proportional reduction of out-of-lineness, based on members' pre-Singapore quota shares and taking into account the first round ad hoc increases provided to four members. They also assume: a) an 8.1 percent increase (total first and second round increase of 10.0 percent); b) basic votes to the level specified above, and protection of the pre-Singapore voting shares of LICs; and c) foregoing by eligible G-7 members to the level specified above.

2/ Based on 1993-2005 data. Reflects the impact of adjustments to current receipts and payments for re-exports, international banking interest, and non-monetary gold. For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).

3/ GDP is blended using GDP weighted 75 percent at market exchange rates and 25 percent at PPP exchange rates. PPP data from the quota database reported in *Quotas—Updated Calculations and Data Adjustments* (2007) were retrieved from the WEO database as of January 31, 2007 (converted to SDRs) for 176 countries; for nine countries with no WEO data, PPP GDP was estimated based on the countries' share in global GDP at market rates.

4/ $Q = (0.5 \times \text{GDP Blend} + 0.3 \times \text{Openness} + 0.15 \times \text{Variability} + 0.05 \times \text{Reserves})^{0.95}$.

5/ $Q = (0.5 \times \text{GDP Blend} + 0.25 \times \text{Openness} + 0.2 \times \text{Variability} + 0.05 \times \text{Reserves})^{0.95}$.

6/ Including Korea and Singapore.

7/ Uniform proportional reduction in the gap between calculated and actual pre-Singapore quota shares, using the formula indicated above.

8/ PRGF-eligible countries.

**Table 3. Second Round Simulation—Illustration of Voting Shares Based on the Filter Approach 1/ 2/ 3/
(In percent)**

| | Pre First Round Increases | Post First Round Increases | Actual Voting Shares Post Second Round | | | | | | | |
|--|------------------------------|-------------------------------|--|--|---|---|--|--|---|---|
| | | | Linear Formula (50/30/15/5) 4/ | | | | Linear Formula (50/25/20/5) 5/ | | | |
| | | | BV = 500 Foregoing to Pre-Singapore Voting Shares | BV = 750 Foregoing to Pre-Singapore Voting Shares | BV = 500 Foregoing to Post-Singapore Voting Shares | BV = 750 Foregoing to Post-Singapore Voting Shares | BV = 500 Foregoing to Pre-Singapore Voting Shares | BV = 750 Foregoing to Pre-Singapore Voting Shares | BV = 500 Foregoing to Post-Singapore Voting Shares | BV = 750 Foregoing to Post-Singapore Voting Shares |
| Advanced economies | 60.6 | 59.5 | 59.2 | 58.7 | 58.8 | 58.3 | 59.2 | 58.7 | 58.8 | 58.3 |
| Major advanced economies | 45.1 | 44.4 | 43.8 | 43.6 | 43.2 | 43.1 | 43.8 | 43.6 | 43.2 | 43.1 |
| Of which: US | 17.0 | 16.7 | 17.0 | 17.0 | 16.7 | 16.7 | 17.0 | 17.0 | 16.7 | 16.7 |
| Other advanced economies | 15.4 | 15.2 | 15.4 | 15.1 | 15.5 | 15.3 | 15.4 | 15.1 | 15.5 | 15.3 |
| Emerging Market and Developing Countries | 39.4 | 40.5 | 40.8 | 41.3 | 41.2 | 41.7 | 40.8 | 41.3 | 41.2 | 41.7 |
| Developing countries | 31.7 | 32.9 | 33.4 | 33.7 | 33.8 | 34.1 | 33.4 | 33.8 | 33.8 | 34.1 |
| Africa | 6.0 | 5.9 | 5.9 | 6.3 | 5.9 | 6.3 | 5.9 | 6.3 | 5.9 | 6.3 |
| Asia 6/ | 10.4 | 11.6 | 12.5 | 12.3 | 12.8 | 12.6 | 12.5 | 12.3 | 12.8 | 12.5 |
| Middle East, Malta & Turkey | 7.6 | 7.6 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.4 | 7.4 |
| Western Hemisphere | 7.7 | 7.8 | 7.8 | 7.9 | 7.8 | 8.0 | 7.8 | 7.9 | 7.8 | 8.0 |
| Transition economies | 7.7 | 7.6 | 7.4 | 7.5 | 7.4 | 7.6 | 7.4 | 7.5 | 7.4 | 7.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Memorandum Items: | | | | | | | | | | |
| No. of countries receiving ad hocs | | | 41 | 40 | 41 | 41 | 39 | 38 | 39 | 39 |
| Uniform reduction factor 7/ | | | 38.5 | 31.1 | 44.9 | 37.9 | 38.8 | 32.0 | 45.1 | 38.2 |
| EU 27 | 32.5 | 32.0 | 31.8 | 31.5 | 31.8 | 31.5 | 31.8 | 31.4 | 31.8 | 31.4 |
| LICs 8/ | 8.3 | 8.1 | 8.5 | 9.1 | 8.5 | 9.1 | 8.5 | 9.1 | 8.5 | 9.1 |

Source: Finance Department.

1/ Under these scenarios, all members are eligible for a quota increase if their out-of-lineness (calculated quota share divided by actual quota share) is greater than 1.0. Emerging market and developing countries are also eligible under a supplementary filter if the member's share of global PPP GDP is 50 percent greater than its actual quota share, and its level of out-of-lineness (calculated quota share over actual quota share, or CQS/AQS) is greater than 0.667 under the specified formula, implying that the member is over-represented by less than 50 percent using its calculated quota share as a base. These scenarios also assume: a) an 8.1 percent increase (total first and second round increase of 10.0 percent); b) basic votes to the level specified above, and protection of the pre-Singapore voting shares of LICs; c) foregoing by eligible G-7 members to the level specified above; d) for underrepresented countries not also eligible under the filter, a uniform proportionate reduction in out-of-lineness; e) for underrepresented countries also eligible under the filter, a uniform proportionate reduction in out-of-lineness or a 5 percent increase above their pre-Singapore voting shares, whichever is greater; and f) for over-represented members eligible under the filter, a 5 percent increase above their pre-Singapore voting shares.

2/ Based on 1993-2005 data. Reflects the impact of adjustments to current receipts and payments for re-exports, international banking interest, and non-monetary gold. For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).

3/ PPP data from the quota database reported in *Quotas—Updated Calculations and Data Adjustments (2007)* were retrieved from the WEO database as of January 31, 2007 (converted to SDRs) for 176 countries and, for nine countries with no WEO data, PPP GDP was estimated based on the countries' share in global GDP at market rates, as published in *Quotas—Updated Calculations and Data Adjustments (2007)*.

4/ $0.50 \times \text{GDP} + 0.3 \times \text{Openness} + 0.15 \times \text{Variability} + 0.05 \times \text{Reserves}$.

5/ $0.50 \times \text{GDP} + 0.25 \times \text{Openness} + 0.2 \times \text{Variability} + 0.05 \times \text{Reserves}$.

6/ Including Korea and Singapore.

7/ Uniform proportional reduction in the gap between calculated and actual pre-Singapore quota shares, using the formula indicated above.

8/ PRGF-eligible countries.

Table 4. Second Round Simulation—Illustration of Voting Shares Based on the Filter Approach with a Threshold 1/ 2/ 3/ (In percent)

| | Pre First Round Increases | | Actual Voting Shares Post Second Round | | | | | | | |
|--|------------------------------|-------|--|--|---|---|--|--|---|---|
| | | | Linear Formula (50/30/15/5) 4/ | | | | Linear Formula (50/25/20/5) 5/ | | | |
| | | | BV = 500 Foregoing to Pre-Singapore Voting Shares | BV = 750 Foregoing to Pre-Singapore Voting Shares | BV = 500 Foregoing to Post-Singapore Voting Shares | BV = 750 Foregoing to Post-Singapore Voting Shares | BV = 500 Foregoing to Pre-Singapore Voting Shares | BV = 750 Foregoing to Pre-Singapore Voting Shares | BV = 500 Foregoing to Post-Singapore Voting Shares | BV = 750 Foregoing to Post-Singapore Voting Shares |
| Advanced economies | 60.6 | 59.5 | 58.9 | 58.4 | 58.5 | 58.0 | 58.9 | 58.4 | 58.5 | 58.0 |
| Major advanced economies | 45.1 | 44.4 | 43.5 | 43.2 | 43.0 | 42.7 | 43.5 | 43.2 | 43.0 | 42.7 |
| Of which: US | 17.0 | 16.7 | 17.0 | 17.0 | 16.7 | 16.7 | 17.0 | 17.0 | 16.7 | 16.7 |
| Other advanced economies | 15.4 | 15.2 | 15.4 | 15.1 | 15.5 | 15.3 | 15.4 | 15.2 | 15.5 | 15.3 |
| Emerging Market and Developing Countries | 39.4 | 40.5 | 41.1 | 41.6 | 41.5 | 42.0 | 41.1 | 41.6 | 41.5 | 42.0 |
| Developing countries | 31.7 | 32.9 | 33.7 | 34.1 | 34.1 | 34.4 | 33.7 | 34.1 | 34.1 | 34.4 |
| Africa | 6.0 | 5.9 | 5.9 | 6.3 | 5.9 | 6.3 | 5.9 | 6.3 | 5.9 | 6.3 |
| Asia 6/ | 10.4 | 11.6 | 12.7 | 12.5 | 13.0 | 12.8 | 12.7 | 12.5 | 13.0 | 12.8 |
| Middle East, Malta & Turkey | 7.6 | 7.6 | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.3 | 7.4 | 7.4 |
| Western Hemisphere | 7.7 | 7.8 | 7.8 | 8.0 | 7.9 | 8.0 | 7.8 | 8.0 | 7.8 | 8.0 |
| Transition economies | 7.7 | 7.6 | 7.4 | 7.5 | 7.4 | 7.5 | 7.4 | 7.5 | 7.4 | 7.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Memorandum Items: | | | | | | | | | | |
| No. of countries receiving ad hocs | | | 33 | 33 | 33 | 33 | 34 | 34 | 34 | 34 |
| Uniform reduction factor 7/ | | | 45.7 | 39.1 | 51.6 | 45.1 | 44.1 | 37.7 | 49.8 | 43.5 |
| EU 27 | 32.5 | 32.0 | 31.6 | 31.2 | 31.6 | 31.2 | 31.6 | 31.2 | 31.6 | 31.2 |
| LICs 8/ | 8.3 | 8.1 | 8.5 | 9.1 | 8.5 | 9.1 | 8.5 | 9.1 | 8.5 | 9.1 |

Source: Finance Department.

1/ Under these scenarios, all members are eligible for a quota increase if their out-of-lineness (calculated quota share divided by actual quota share) is greater than 1.1. Emerging market and developing countries are also eligible under a supplementary filter if the member's share of global PPP GDP is 50 percent greater than its actual quota share, and its level of out-of-lineness (calculated quota share over actual quota share, or CQS/AQS) is greater than 0.667 under the specified formula, implying that the member is over-represented by less than 50 percent using its calculated quota share as a base. These scenarios also assume: a) an 8.1 percent increase (total first and second round increase of 10.0 percent); b) basic votes to the level specified above, and protection of the pre-Singapore voting shares of LICs; c) foregoing by eligible G-7 members to the level specified above; d) for underrepresented countries not also eligible under the filter, a uniform proportionate reduction in out-of-lineness; e) for underrepresented countries also eligible under the filter, a uniform proportionate reduction in out-of-lineness or a 5 percent increase above their pre-Singapore voting shares, whichever is greater; and f) for over-represented members eligible under the filter, a 5 percent increase above their pre-Singapore voting shares.

2/ Based on 1993-2005 data. Reflects the impact of adjustments to current receipts and payments for re-exports, international banking interest, and non-monetary gold. For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).

3/ PPP data from the quota database reported in *Quotas—Updated Calculations and Data Adjustments* (2007) were retrieved from the WEO database as of January 31, 2007 (converted to SDRs) for 176 countries and, for nine countries with no WEO data, PPP GDP was estimated based on the countries' share in global GDP at market rates, as published in *Quotas—Updated Calculations and Data Adjustments*.

4/ $0.5 \times \text{GDP} + 0.3 \times \text{Openness} + 0.15 \times \text{Variability} + 0.05 \times \text{Reserves}$.

5/ $0.5 \times \text{GDP} + 0.25 \times \text{Openness} + 0.2 \times \text{Variability} + 0.05 \times \text{Reserves}$.

6/ Including Korea and Singapore.

7/ Uniform proportional reduction in the gap between calculated and actual pre-Singapore quota shares, using the formula indicated above.

8/ PRGF-eligible countries.