Quota and Voice Reform—Key Elements of a Potential Package of Reforms, Statistical Appendix, and Summing of the Board Meeting, February 26, 2008

IMF documents cited in this report are available at www.imf.org

INTERNATIONAL MONETARY FUND

Quota and Voice Reform—Key Elements of a Potential Package of Reforms

Prepared by the Quotas and Voice Working Group[1]

Approved by David Burton

February 26, 2008

Contents Page

I. Introduction 4

II. New Quota Formula 4

III. Second Round Ad Hoc Quota Increases 7

IV. Outcomes 11

V. Other Elements of the Package 11

VI. Issues for Discussion 12

Tables
1. Second Round Simulation – Illustration of Voting Shares 14
2. Second Round Simulation – Illustration of Quota and Voting Shares 15
3. Second Round Simulation – Increases and Decreases in Quota and Voting Shares 16

Boxes
1. Key Elements of the Proposed Package for Quota and Voice Reform 13

Appendices
1. Key Elements of the Reform Agenda Approved in Singapore 17
2. Alternative Measures of Variability—Further Considerations 18

[1] Messrs. Burton (Chair), Ahmed, Anjaria, Edwards, Hagan, Kuhn, and Kincaid; a FIN team led by Mr. Tweedie has worked closely with the group.

Appendix Tables

A1. Alternative Measures of Variability..21
A2. Alternative Measures of Variability – Shares of Variable..23
A3. Alternative Measures of Variability – Shares of Variable..24

I. Introduction

1. The IMFC in its October 2007 Communiqué called on the Executive Board to continue its work on quota and voice reform in order to allow agreement on all elements of a reform package by Spring 2008.[2] To facilitate progress toward this goal, this paper suggests the possible contours of such a reform package. The package outlined is intended to be consistent with the objectives set out in the Singapore Resolution (Appendix 1), which were to make significant progress in realigning quota shares with economic weight in the global economy and, equally important, to enhance the participation and voice for low-income countries. It also reflects the further guidance provided in the IMFC's October 2007 Communiqué, including the goal of agreeing on all elements of the package by Spring 2008.

2. The formulation of the suggested package also draws on the considerable discussion of the various elements that has taken place in the Executive Board since Singapore.[3] This discussion is summarized in the Executive Board's Report to the Board of Governors of October 16, 2007,[4] which highlighted both areas of agreement and issues on which differences remained. The elements of the reform package suggested below seek to balance the differing views and priorities of members as identified in the report to the Board of Governors. Inevitably, the approach suggested here will not fully meet the preferences or priorities of any member, and progress toward agreement will require difficult compromises on the part of all members.

II. New Quota Formula

3. Agreement on a new quota formula that provides a simpler and more transparent means of capturing members' relative positions in the world economy was a central element of the reform agenda agreed in Singapore. Considerable progress has been made towards this objective in the Executive Board discussions to date. In particular, there is agreement that the new formula should be consistent with the multiple roles of quotas, feasible to implement statistically, and produce results that are broadly acceptable to the membership.

---

[2] *Communiqué of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund* (PR/07/236, October 20, 2007).

[3] *Quotas—Further Thoughts on a New Quota Formula* (2006); *A New Quota Formula—Additional Considerations* (2007); *Quota and Voice Reform—Stocktaking and Further Considerations* (2007); The Chairman's Summing Up, *Quota and Voice Reform—Stocktaking and Further Considerations* (2007); *Quota and Voice Reform—Elements of a Possible Approach* (2007); The Chairman's Summing Up, *Quota and Voice Reform—Elements of a Possible Approach* (2007).

[4] *Report of the Executive Board to the Board of Governors—Quota and Voice Reform—Progress Since the 2006 Annual Meetings* (2007).

4. There is also broad consensus that the variables should be limited to updated and modernized versions of the four variables included in the existing formulas—GDP, openness, variability and reserves. It was agreed that GDP should be the most important variable, with strong support for a weight of 50 percent, and that reserves should have a relatively low weight, while views continued to differ on the relative weights to be assigned to openness and variability. There were also important differences on the definition of GDP, namely whether it should continue to be measured solely at market exchange rates or as a blend variable combining market rate and PPP GDP, and calls for further work on the definitions of openness and variability. In addition, there was considerable support for use of a compression factor in the formula, particularly under an approach involving a blended GDP variable. In its October 2007 Communiqué, the IMFC supported the inclusion of GDP in the new formula as the most important variable. The Committee also considered that PPP GDP should play a role, along with a compression factor.

5. Taking account of the above views, and recognizing that significant differences remain on some key issues, **staff proposes a formula with the following elements** as a possible way forward:[5]

- A single formula with four variables based on the following weights: GDP, 50 percent; openness, 30 percent; variability, 15 percent; and reserves, 5 percent. This would represent a major simplification and improvement in transparency over the existing quota formulas. It would broadly maintain the average weights on variability and reserves implicit in the existing formulas based on current data, while reversing those on GDP and openness.[6] [7]

---

[5] While the staff believe that this formula would represent a major advance over the existing five formula system, the new quota formula can and should be further modernized over time to reflect global economic trends and improvements in data availability.

[6] Under the existing five formula system and using current data, the average contributions of the variables are approximately: GDP, 30 percent; openness, 50 percent; variability, 13 percent; and reserves, 7 percent, although these contributions (and by extension the implicit weights) vary substantially across individual members under the existing formulas. The weights would be uniform for all members under the proposed new single formula.

[7] The database for the quota calculations is presented in *Quotas—Updated Calculations and Data Adjustments* (2007), except for PPP GDP.

- A GDP blend variable with weights of 60 percent on market GDP and 40 percent on PPP GDP.[8] While staff believes that inclusion of PPP GDP in the formula can be justified based on the non-financial roles of quotas, it recognizes that this view has not been accepted by a number of members, and that such an approach would therefore represent a substantial element of compromise on their part. As discussed below, staff proposes that the inclusion of PPP GDP in the formula be subject to a sunset clause.

- Use of the measures for openness and variability that have been used in recent illustrative calculations, with no further modifications at this stage. While this represents an improvement over the measures used in the existing formulas, it does not address the various concerns raised during the Board discussions about their remaining shortcomings, including the concern that openness is measured on a gross rather than a value-added basis, that financial openness is not explicitly included, and that the existing measure of variability may not adequately capture members' potential need for Fund resources. As such, staff recognizes that agreement to proceed on this basis would represent a substantial compromise from many members, and that efforts to improve these measures should continue.[9]

- A compression factor of 0.95. As noted, the inclusion of a compression factor has received support as a means of reducing the dispersion of calculated quotas and moderating to some extent the role of size in the formula. However, not all members support such an approach, and it could also dampen the formula's ability to capture dynamism over time. Accordingly, staff suggest that the role of compression could also be subject to a sunset clause (see below).

- Inclusion of a sunset clause for both PPP GDP and compression. Previous work suggests that a significant degree of convergence between market and PPP GDP can be expected for dynamic economies within a period of 20 years, recognizing that convergence for other countries will likely take significantly longer.[10] Accordingly,

---

[8] Updated PPP GDP data, incorporating new parity rates published by the International Comparison Program in December 2007, are applied. These data reflect substantial improvement in the methodology and consistency of PPP estimates.

[9] Staff has revisited its earlier work on alternative measures of variability, as summarized in Appendix 2. While there are appealing features associated with a number of these alternatives, staff has found it difficult to identify a measure that is clearly superior to the current approach and would not represent a substantial departure from the tradition of considering balance-of-payments-driven vulnerabilities.

[10] A review of the academic literature suggests that differences between PPP exchange rates and market exchange rates (and hence between PPP GDP and GDP at market exchange rates) are largely related to

(continued)

- agreement on a new formula along the lines discussed above could be combined with a sunset clause that would indicate that the inclusion of PPP GDP in the formula is intended to be temporary and that its role should be phased out over a period of, say, 20 years. The precise modalities of such a phase out could either be pre-specified or left open at this stage. As discussed above, it may also be appropriate to apply the sunset clause to the compression factor. These elements could be included in the Board of Governors Resolution concluding the current reform.[11]

III. SECOND ROUND AD HOC QUOTA INCREASES

6. The October 2007 IMFC Communiqué reiterated that the current reform should enhance representation for dynamic economies, many of which are emerging market economies, whose weight and role in the global economy have increased. It noted that an outcome of the second round should be a further increase in the voting share of emerging market and developing countries as a whole. The Committee also stressed the importance of enhancing the voice and participation of low-income countries, and that the total quota increase should be of the order of 10 percent, with at least a doubling of basic votes.

7. In light of the above, staff has explored a range of possible options for the second round increases. On balance, a package along the lines outlined below could be considered as a possible means of achieving the various objectives of the reform, recognizing that any such package will inevitably involve trade-offs and require a substantial degree of compromise on all sides in order to achieve the necessary broad consensus.

Size of the Overall Increase

8. Staff has considered alternative options for the size of the second round ad hoc increases in line with the guidance from the IMFC. As indicated in Table 1, it would be difficult to achieve the objectives of the reform with a 10 percent increase, even assuming foregoing by eligible G7 members to their pre-Singapore voting share and a doubling of basic votes. A slightly larger increase would provide scope to reinforce achievement of the reform's objectives through the additional elements described in this section. As such, the

---

differences in per capita income. There is some evidence of convergence of price levels in emerging markets with those in the United States, but with wide variation across countries. Based on the estimated relationship between per capita income and relative price levels and on current growth rates, about 40 of the most dynamic countries would be expected to converge to 80 percent of the US price level within 20 years.

[11] A statement by the Board of Governors would not tie the hands of future Boards regarding the quota formula, but would provide important guidance on the intentions of the membership.

proposal set out in this paper is based on **an overall increase in the two rounds combined of 11.5 percent** (9.6 percent in the second round), recognizing that there are members that would prefer a larger increase and others that would prefer a smaller increase.

Allocation Mechanism

9. Previous illustrative calculations presented by the staff have assumed that second round ad hoc increases would be allocated to all underrepresented members under the new quota formula based on a uniform proportional reduction in members' out-of-lineness, or the difference between members' calculated quota shares under the proposed formula and their actual pre-Singapore quota shares. This allocation method, which follows that adopted in the first round, would provide for larger percentage nominal quota increases to those members whose actual quotas are most out-of-line with their calculated quota shares. The use of pre-Singapore quota shares as the basis for allocation is also consistent with treating the two rounds as a single reform, i.e., with the first round increases intended as a downpayment on a larger reform based on a new quota formula. Accordingly, staff has maintained this approach in the proposal set out below.

Additional Elements of the Second Round Quota Increases

10. Staff has considered several possible additional elements for this package that could help achieve the objectives of the current reform and build the necessary broad consensus:

- **Additional foregoing by eligible G7 members**. As noted, a willingness by large advanced economies to forego on a voluntary basis a portion of the increase for which they would otherwise be eligible can make an important contribution to the overall realignment of shares. The package presented here is based on foregoing by the U.S. to its post-Singapore voting share, which goes beyond its current commitment. This would free up a larger portion of the increase to be allocated to other dynamic underrepresented members. It is assumed here that the same proportionate reduction in out-of-lineness would apply to other eligible G7 members (Germany, Italy and Japan). Under this formulation, all eligible G7 members would see an increase in their quota share versus pre-Singapore levels. Japan would also see a slight increase in its voting share versus its pre-Singapore share. The U.S. would remain at its post-Singapore voting share, while Italy and Germany would see a small decline from post-Singapore levels.

- **Maximum increase for advanced economies**. To free up additional space for increases to underrepresented emerging market and developing countries, consideration could also be given to including a cap on the maximum percentage increase available for advanced countries. For illustrative purposes, staff has included a cap of 50 percent, which would affect two members, Luxembourg (which otherwise would receive a quota increase of 128 percent under the proposal outlined in this paper) and Ireland (which otherwise would receive a 73 percent increase).

- **Booster:** Beyond increases arising from application of an allocation rule linked to the formula, consideration could be given to providing an additional increase, or booster, to ensure a *minimum* increase in quota or quota share for dynamic under-represented emerging market and developing economies as part of the current reform. This would build on an element proposed previously in the context of the "filter" approach, under which emerging market and developing countries whose shares in global PPP GDP are substantially larger than their actual quota shares would receive an agreed minimum increase.[12] It could therefore be seen as giving additional recognition to dynamism by bringing forward expected growth for those countries that are most out-of-line in terms of PPP GDP. The earlier approach, which was combined with a formula based solely on market rate GDP, used a cut-off ratio of 1.5 (i.e., it included countries with a share in global PPP GDP more than 50 percent larger than their actual quota share). Given that staff is now proposing a formula that already includes a significant element of PPP GDP, a higher cut-off ratio may be appropriate. The staff is suggesting a cut-off ratio of 1.75, which would limit eligibility for the booster to the seven countries most substantially underrepresented in PPP terms (see Text Table). The suggested booster provides a minimum nominal quota increase of 40 percent, which would ensure that qualifying members receive a substantial increase that is still within the range of overall increases received by other under-represented countries. Under this approach, India, Brazil, and Vietnam would benefit from the booster.

- **Minimum second-round increase for Singapore 4:** The Board has recognized that, under the proposed allocation mechanism, the four members that received increases in the first round may not be eligible for further increases in the second round (or that these increases would not be sufficient to maintain their post-Singapore voting share). Given that these members remain substantially underrepresented following the first round, consideration could be given to providing a *minimum* second round nominal quota increase from post-Singapore levels for these members. Under the package outlined here, staff has proposed a minimum increase of 15 percent, which is large enough to provide for a small increase in voting shares for these members. Under the proposal, this would benefit two countries—Korea and Mexico.

[12] See *Quota and Voice Refrom—Stocktaking and Further Considerations* (2007), and *Quota and Voice Reform—Elements of a Possible Approach* (2007).

Members Eligible For Booster

	PPP/AQS 1/	Out-of-Lineness Ratio 2/	Percent Increase in Nominal Quota (1st and 2nd Round)
China 3/	3.24	2.14	49.6
Korea 4/	2.45	2.94	106.1
Turkey	2.20	2.19	51.0
India 5/	2.11	1.03	40.0
Brazil 5/	2.04	1.21	40.0
Vietnam 5/	2.04	1.49	40.0
Mexico 4/	1.78	1.63	40.2

Source: Finance Department

1/ Ratio of member's share of 3-year average global GDP measured at purchasing power parity exchange rates to member's pre-Singapore quota share. Underrepresented EMDCs would be eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
2/ Ratio of member's calculated quota share (CQS) to pre-Singapore quota share. CQS based on the formula and parameters proposed by staff (paragraph 5).
3/ Includes China, P.R., and Hong Kong SAR.
4/ Receive minimum 15 percent second-round nominal quota increase under safeguard for Singapore 4.
5/ Receive booster at 40 percent.

Basic Votes

11. The October 2007 IMFC Communiqué reiterated the call for at least a doubling of basic votes.[13] Directors have recognized that the increase in basic votes is an integral part of the quota and voice reform, and a key measure for enhancing the voice and participation of low-income countries, with many calls for at least a tripling. As such, staff propose a **tripling of basic votes**, which would lead to a significant increase in the voting share for low-income country members as a group and to considerable increases in voting share for many countries with below-average quotas. As specified in the Singapore Resolution and discussed previously by the Board, a mechanism would also be established through an amendment of the Articles to maintain the share of basic votes to total votes going forward.

[13] The Board held a preliminary discussion of the legal framework for a change in basic votes in early 2007.

IV. OUTCOMES

12. The results of the package outlined above are summarized in the second simulation of Table 1 and in more detail in Table 2 (Table 2a in the Statistical Appendix provides country-by-country information). The package would result in ad hoc quota increases for 54 countries, with an aggregate shift in quota shares of 4.9 percentage points. The number of countries receiving increases in voting share as a result of the reform would be significantly larger (135), reflecting the impact of basic votes, and the aggregate shift in voting share to these countries would amount to 5.4 percentage points.

13. The largest gains in both voting and quota share would go mainly to dynamic emerging market countries (Table 3; Tables 3a–3c provide more detailed country-by-country information). In keeping with the expectation that an outcome of the second round will be a further increase in the voting share of emerging market and developing economies as a whole, the net shift in voting shares to these countries as a result of the reform would be 2.7 percentage points (1.1 percentage points in terms of quota shares). As noted above, the increase in basic votes would also lead to a substantial increase in voting share for small members, including many low-income countries (Table 3c).

V. OTHER ELEMENTS OF THE PACKAGE

Future Realignments of Quota Shares

14. The Board has recognized the need to consider how quota and voting shares can continue to adapt in the future to changes in the global economy, while ensuring that the Fund has adequate liquidity to achieve its purposes. This is particularly important for members that may not benefit, or receive only limited increases, under the current round of ad hoc increases, but are expected to experience dynamic growth in coming years. The regular five-yearly reviews of quotas provide a vehicle for realigning quota shares, and the Board of Governors Resolution could include a request that the Executive Board consider a further realignment of quota shares in line with changes in members' relative economic positions as part of any increase in quotas under the next (fourteenth) general quota review. This would reaffirm the commitment made in the Singapore Resolution.[15] The Resolution could also indicate that, if there is no agreement on a general quota increase during the fourteenth review period, the Executive Board will promptly thereafter consider the need for additional ad hoc quota increases to achieve a further improvement in the alignment of members' quota shares with their relative economic positions.

---

[15] The Singapore Resolution states that, "in the context of general reviews of quotas following the current quota and voice reforms, the Board of Governors will consider distributing any increase in quotas with a view to achieving better alignment of members' quotas with their relative positions in the world economy, while ensuring that the Fund has adequate liquidity to achieve its purposes."

Additional Alternate Executive Director for African Constituencies

15. In November 2007, the Board considered on a preliminary basis an amendment to the Articles to enable Executive Directors elected by a large number of members to appoint an additional Alternate Executive Director.[15] The objective was to further enhance the capacity of African offices, recognizing their special challenges, including the heavy workload that flows from the important advisory and financial role that the Fund is playing in many of the member countries of these constituencies. At that time, Directors generally felt that further reflection and discussion would be useful before the Board reaches a final decision on the amendment and agreed to return to the issue. Accordingly, Directors may wish to revisit the issue of an amendment as part of their consideration of the broader elements of the package discussed in this paper, including how the proposal might be accommodated within the envisaged medium-term budget envelope.

VI. Issues for Discussion

16. Directors may wish to give their views on whether they consider the package outlined in this paper provides a reasonable basis for moving forward towards agreement on the quota and voice reform within the timetable laid out by the IMFC. In particular, Directors may wish to comment on:

- The new quota formula discussed in Section II above, including the use of a blended GDP variable with a 40 percent weight on PPP GDP and a 0.95 compression factor.
- The possible modalities of a sunset clause for the inclusion of PPP GDP and compression in the formula, if this was agreed as part of the current reform.
- The possible elements of the second round ad hoc quota increases discussed in Section III above.
- The possible nature of the commitment to future realignments of quota shares beyond the current reform.
- An amendment to the Articles to enable Executive Directors representing large constituencies to appoint more than one Alternate and how such a proposal could be accommodated within the envisaged budget.

[15] In May 2007, the Executive Board, taking into account the budgetary situation, approved an increase in the staffing resources for the two African Executive Directors' offices, which represent the largest constituencies, through the allocation of an additional advisor position.

Box 1. Key Elements of the Proposed Package for Quota and Voice Reform

Quota Formula:

- *Variables and Weights:* 50 percent for GDP, 30 percent for openness, 15 percent for variability, and 5 percent for reserves.
- *Blended GDP Variable:* 60 percent weight to market-rate GDP and a 40 percent weight to PPP GDP under the blended GDP variable.
- *Compression:* a compression factor of 0.95 applied to the formula.
- *Sunset of GDP Blend and Compression:* Agreement to phased reduction of PPP GDP and compression over time (e.g., 20 years).

Second Round Increases:

- *Size:* overall increase in the two rounds of 11.5 percent (9.6 percent in the second round)
- *Allocation mechanism:* Uniform proportionate reduction in out-of-lineness for underrepresented countries under the formula based on pre-Singapore quota shares, except where otherwise indicated (see below).
- *Additional elements:*
    - *Foregoing:* Voluntary foregoing by eligible G7 members. US foregoing to its post-Singapore voting share and application of the same reduction factor to Germany, Italy and Japan.
    - *Booster:* Provision for minimum 40 percent overall nominal quota increase for underrepresented emerging market economies with a share of PPP GDP more than 75 percent greater than pre-Singapore quota share.
    - *Safeguard for Singapore 4.* Provision for 15 percent minimum nominal quota increase for Singapore 4 from post-Singapore levels.
    - *Cap*: Maximum 50 percent nominal quota increase for advanced economies.
- *Basic Votes:* Tripling of basic votes and maintenance of share of basic votes to total votes going forward.

Other Elements:

- *Review:* Commitment to review the need for additional ad hoc quota increases to achieve a further rebalancing of quota shares within a specified timeframe.
- *Alternate Executive Director:* An amendment of the Articles to allow for an additional Alternate Executive Director for the two African constituencies.

Table 1. Second Round Simulation – Illustration of Voting Shares 1/
(In percent)

	Pre First Round	Post First Round	Post Second Round Ad Hoc Increases 2/	
			Increase=10% 3/	Increase=11.5% 4/
Advanced economies	60.6	59.5	59.1	57.9
Major advanced economies	45.1	44.4	43.7	43.0
Of which: US	17.0	16.7	17.0	16.7
Other advanced economies	15.4	15.2	15.4	14.9
Emerging Market and Developing Countries	39.4	40.5	40.9	42.1
Developing countries	31.7	32.9	33.4	34.5
Africa	6.0	5.9	5.9	6.2
Asia 5/	10.4	11.6	12.4	12.8
Middle East, Malta & Turkey	7.6	7.6	7.4	7.3
Western Hemisphere	7.7	7.8	7.8	8.2
Transition economies	7.7	7.6	7.5	7.6
Total	100.0	100.0	100.0	100.0
Memorandum Items:				
No. of countries receiving ad hocs			54	54
No. of countries receiving voting share increase			122	135
Uniform reduction factor 6/			34.1	29.8
EU 27	32.5	32.0	31.8	30.9
LICs (PRGF-eligible)	8.3	8.1	8.4	9.4
Overall voting share shift (p.p.) 7/			4.2	5.4

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^K. GDP blended using 60 percent market and 40 percent PPP exchange rates. K is a compression factor of 0.95. Simulations assume an overall increase (first and second rounds combined) as indicated above; and uniform proportional reduction of out-of-lineness, based on members' pre-Singapore quota shares. Takes into account the first round ad hoc increases provided to four members.
3/ Assumes foregoing by eligible G-7 members to their pre-Singapore voting shares if possible and a doubling of basic votes.
4/ Includes the following additional elements: U.S. foregoing to post-Singapore voting share if possible and application of the U.S. reduction factor to other eligible G-7 members; a tripling of basic votes; a minimum 15 percent increase in post-Singapore nominal quota for first round ad hoc increase recipients; a maximum 50 percent quota increase for advanced economies; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
5/ Including Korea and Singapore.
6/ Uniform proportional reduction in the gap between calculated and pre-Singapore quota shares, using the formula indicated above.
7/ Change in voting share from pre-Singapore levels for all members that see a voting share increase.

Table 2. Second Round Simulation – Illustration of Quota and Voting Shares 1/
(In percent)

	Calculated Quota Shares		Quota Shares			Voting Shares		
	Existing Five Formulas	New Formula 2/	Pre First Round	Post First Round	Post Second Round 2/ 3/	Pre First Round	Post First Round	Post Second Round 2/ 3/
Advanced economies	65.6	63.8	61.6	60.5	60.5	60.6	59.5	57.9
Major advanced economies	45.9	47.6	46.0	45.2	45.3	45.1	44.4	43.0
Of which: US	16.3	19.0	17.4	17.1	17.7	17.0	16.7	16.7
Other advanced economies	19.7	16.2	15.6	15.3	15.1	15.4	15.2	14.9
Emerging Market and Developing Countries	34.4	36.2	38.4	39.5	39.5	39.4	40.5	42.1
Developing countries	28.6	30.0	30.9	32.1	32.4	31.7	32.9	34.5
Africa	2.4	2.8	5.5	5.4	5.0	6.0	5.9	6.2
Asia 4/	16.2	15.8	10.3	11.5	12.6	10.4	11.6	12.8
Middle East, Malta & Turkey	4.8	4.8	7.6	7.6	7.2	7.6	7.6	7.3
Western Hemisphere	5.2	6.6	7.5	7.6	7.7	7.7	7.8	8.2
Transition economies	5.7	6.2	7.6	7.4	7.1	7.7	7.6	7.6
Total	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
No. of countries receiving voting share increase								135
Uniform reduction factor 5/								29.8
EU 27	37.8	32.9	32.9	32.4	31.9	32.5	32.0	30.9
LICs (PRGF-eligible)	3.6	4.9	7.5	7.4	7.5	8.3	8.1	9.4
Overall voting share shift (p.p.) 6/								5.4

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^K. GDP blended using 60 percent market and 40 percent PPP exchange rates. K is a compression factor of 0.95.
3/ Simulation assumes an overall increase of 11.5 percent (first and second rounds combined); U.S. foregoing to its post-Singapore voting share and application of the U.S. reduction factor to other eligible G-7 members; 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; minimum 15 percent increase in post-Singapore nominal quota for these four countries; a maximum 50 percent quota increase for advanced countries; a tripling of basic votes; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
4/ Including Korea and Singapore.
5/ Uniform proportional reduction in the gap between calculated and pre-Singapore quota shares, using the formula indicated above.
6/ Change in voting share from pre-Singapore levels for all members that see a voting share increase.

Table 3. Second Round Simulation – Increases and Decreases in Quota and Voting Shares 1/ 2/
(In percentage points)

	Quota Share				Voting Share		
Country	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round	Country	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round
Top 10: Positive Change from pre-Singapore				*Top 10: Positive Change from pre-Singapore*			
China 3/	0.74	0.28	1.02	China 3/	0.72	0.15	0.88
Korea	0.58	0.07	0.65	Korea	0.57	0.04	0.61
India	-0.03	0.53	0.50	India	-0.03	0.46	0.42
Brazil	-0.02	0.39	0.36	Brazil	-0.02	0.34	0.31
Japan	-0.11	0.44	0.33	Mexico	0.23	0.04	0.27
Mexico	0.24	0.07	0.31	Spain	-0.02	0.24	0.22
United States	-0.30	0.60	0.29	Singapore	-0.01	0.19	0.18
Spain	-0.02	0.29	0.26	Turkey	0.09	0.06	0.15
Singapore	-0.01	0.19	0.19	Ireland	-0.01	0.14	0.13
Turkey	0.10	0.06	0.16	Japan	-0.10	0.22	0.12
Top 10: Negative Change from pre-Singapore				*Top 10: Negative Change from pre-Singapore*			
United Kingdom	-0.09	-0.43	-0.52	United Kingdom	-0.08	-0.56	-0.64
France	-0.09	-0.43	-0.52	France	-0.08	-0.56	-0.64
Saudi Arabia	-0.06	-0.28	-0.34	Saudi Arabia	-0.06	-0.36	-0.41
Canada	-0.05	-0.26	-0.31	Canada	-0.05	-0.32	-0.37
Russia	-0.05	-0.24	-0.29	Russia	-0.05	-0.30	-0.35
Netherlands	-0.04	-0.21	-0.25	Netherlands	-0.04	-0.26	-0.30
Belgium	-0.04	-0.18	-0.22	United States	-0.29	0.00	-0.29
Switzerland	-0.03	-0.14	-0.17	Belgium	-0.04	-0.23	-0.26
Australia	-0.03	-0.13	-0.16	Switzerland	-0.03	-0.17	-0.19
Venezuela	-0.02	-0.11	-0.13	Australia	-0.03	-0.15	-0.18
Shift to Countries Gaining Share: 4/	0.83	4.08	4.91		1.22	4.21	5.42

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^0.95. GDP blended using 60 percent market and 40 percent PPP exchange rates. Simulation assumes an overall increase of 11.5 percent (first and second rounds combined); U.S. foregoing to its post-Singapore voting share and application of the U.S. reduction factor to other eligible G-7 members; 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; a minimum 15 percent increase in post-Singapore nominal quota for these four countries; a maximum 50 percent quota increase for advanced economies; a tripling of basic votes; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
3/ Includes China, P.R., and Hong Kong SAR.
4/ For quota shares, sum for the 54 countries that receive ad hoc increases in the second round. For voting shares, sum for the 135 countries that see an increase. In each case, the totals refer to the same two groups such that the shift from pre- to post-Singapore reflects the net impact of increases for China, Korea, Mexico and Turkey and declines for all other countries in the group.

Appendix 1. Key Elements of the Reform Agenda Approved in Singapore[1]

- Initial ad hoc quota increases of four of the most clearly underrepresented members—China, Korea, Mexico and Turkey;
- Agreement, by the time of the 2008 Spring Meetings, on a new quota formula that can provide a simpler and more transparent means of capturing members' relative positions in the world economy;
- A second round of ad hoc quota increases, based on the new formula, with a view to achieving a significant further alignment of members' quotas with their relative positions in the world economy;
- Agreement that general reviews of quotas conducted after the completion of these reforms also consider distributing any increases in quotas with a view to achieving a better alignment of members' quotas with their relative positions in the world economy, while ensuring that the Fund has adequate liquidity to achieve its purposes;
- An amendment to the Articles of Agreement that would provide for at least a doubling of basic votes that at a minimum protect the pre-Singapore voting share of low-income countries as a group, while also ensuring that the share of basic votes to total votes is preserved in the future;
- An increase in staffing resources available to Executive Directors representing a large number of members, whose workload is particularly heavy; and
- Consideration of the merits of an amendment to the Articles to enable Executive Directors representing a large number of members to appoint more than one Alternate Executive Directors.

[1] *Report of the Managing Director to the International Monetary and Financial Committee on IMF Quota and Voice Reform* (2006).

Appendix 2: Alternative Measures of Variability—Further Considerations

1. This analysis responds to the request for further work on possible modifications to the modernized definition of variability in the quota formula. It summarizes analysis on this question from Appendix 1 of *Quota and Voice Reform—Stocktaking and Further Considerations* (2007), and also examines a small number of other potential approaches.[1 2] While there are appealing features associated with several of the alternatives presented below, staff have found it difficult at this stage to define a measure of variability that improves upon the current measure and does not represent a substantial departure from the tradition of considering balance-of-payments-driven vulnerabilities. Work on alternative variability measures, however, should continue as part of the future work program on quotas.

2. The variability measure is intended to reflect members' potential need for Fund resources.[3] The modernized variability measure is defined as the standard deviation of current receipts and net capital flows from a centered, three-year moving average over a recent 13-year period. However, questions have been raised as to whether the measure adequately captures members' potential need for Fund resources, and it has been noted in this context that advanced economies as a group hold the majority share of the variable. Such questions reflect the challenge of defining a single measure that can capture members' (i) relative susceptibility to exogenous shocks, (ii) relative capacity to absorb such shocks, and (iii) the potential size of access in case of a need to borrow. At the same time and related to these factors, the variability measure must take into account every member's right to draw in case of need. Moreover, it is difficult to evaluate whether a measure is adequately capturing potential need given the uncertainty associated with forecasting potential demand for Fund resources, particularly in an environment where the determinants of demand and the nature of the Fund's financial role are evolving.

3. Staff have examined alternative definitions of variability, summarized in Table A1.

- *Scaling:* A number of alternatives have been suggested based on dividing the current measure (or a variant of the current measure) by either GDP or the mean of the series (See Table A1, Approaches 1–3). Such approaches, however, would not be expected

---

[1] *Quota and Voice Reform—Stocktaking and Further Considerations* (2007) and *The Chairman's Summing Up—Quota and Voice Reform—Stocktaking and Further Considerations* (2007). The summing up notes that while many Directors indicated that the current measure of variability should be retained without modification, many other Directors saw scope for further staff work to develop a better measure of variability.

[2] New approaches are indicated with an asterisk in Table A1.

[3] The Quota Formula Review Group pointed out that such a measure of vulnerability also captures the ability to contribute in periods of exceptionally large receipts, which has been important during periods of high oil prices. (*Report to the IMF Executive Board of the Quota Formula Review Group,* 2000).

to improve the measurement of members' susceptibility to and capacity to absorb shocks, but rather would remove from the measure the important consideration of potential size of need. As such, these measures award disproportionately large shares of the variable to the smallest economies. A volatility measure without a size dimension, such as Approach 13, would raise similar issues.

- *Amendments to the Current Measure*: Table A1 also reviews several approaches that amend the definition of the current variable (Approaches 4–8). These approaches, which were discussed in depth in the July annex, would require less substantial redefinitions of the variable, but also would tend to have a fairly marginal impact on variability shares by aggregate groups.

  Another alternative for amending the variable that has been suggested recently is to measure the standard deviation of *net current account flows* and net capital flows instead of current receipts and net capital flows (Approach 9). Such a measure would largely capture changes in reserves which are affected by a range of factors not related to potential need, including the members' exchange rate regime.[4] [5]

- *Redefinition of the Variable:* A number of approaches for a more fundamental redefinition of the variable have also been explored (Approaches 10–12 and 15–16). In Approaches 10–12, the measure has been scaled up by a relevant factor (i.e., GDP, consumption) to take into account the potential size of demand. In a number of cases, data constraints are binding at this stage (this is particularly relevant to approaches based on measures of external assets, local financial market development, and, to a lesser extent, consumption).

  A measure based on GDP volatility appears to be the most feasible of this group. As noted previously, such a measure would represent a fundamental departure from the current practice of taking into account the effects of shocks that are manifested in variations in balance of payments flows only.

- *Ad hoc Adjustment:* Given the substantial difficulty in defining a single objective measure that captures differences in country circumstances, an ad hoc adjustment may be considered to recognize the relatively stronger capacity of advanced economies to absorb balance of payments shocks (Approach 14). Any such adjustment, however, would be necessarily arbitrary and would represent a major

[4] Given the definition of the variable in the quota formula, this also captures net errors and omissions.

[5] Such a measure, by netting current receipts and payments, would also mask adjustments within the current account that may be relevant to potential need.

departure from historical practice by applying differential treatment to different country groups in the underlying data.

4. Questions have also been raised as to whether there may be some distortions in the measurement of the variable, given the relatively high shares of the variable held by a small number of small, open advanced economies. A number of factors might contribute to such an outcome, including the relative economic circumstances of these members. Staff examined the potential effect of adjusting for economies with a disproportionately high share of the variability measure versus either GDP shares or actual quota shares. Given the very small number of cases and the small share of the membership affected, such adjustments would have a negligible effect on the distribution of shares.

5. In sum, the variability measure must seek to capture several dimensions relevant to potential demand across the membership. This is particularly challenging as economies have varying degrees of capacity to absorb shocks and because of the inherent difficulty in predicting potential demand for Fund resources, especially given the changes in the determinants of demand and the evolving role of the Fund. Work on alternative variability measures, including through analysis on improving forecasts of potential demand for Fund resources, should nonetheless continue as part of the future work program on quotas.

Table A1. Alternative Measures of Variability 1/

Concept	Comments
Scaling:	
1. Scaling the current measure by GDP	Proxy for the probability of need; does not take into account potential size of need. Some of the smallest members receive shares that exceed those of the largest EMDCs.
2. Scaling the current measure by the mean of CR+NCF	Proxy for the probability of need; does not take into account potential size of need. Some of the smallest members receive shares that exceed those of the largest EMDCs.
3. Scaling the current measure by GDP per capita	Adjusts the current measure by countries' capacity to absorb shocks, proxied by GDP per capita. Mainly driven by population shares, and as such, problematic as a measure of the potential need for Fund resources.
Amendments to the current measure:	
4. The use of a five-year trend	Attributes a greater fraction of the overall CR+NCF fluctuations to variability than the use of three-year averaging, which attributes a greater fraction to underlying trends. Specifically, a five-year moving average is generally smoother, yielding greater deviations of CR+NCF both above and below the trend. A five year moving average would therefore more adequately capture potential need where short term trends in CR+NCF may pose balance of payments problems whereas three-year averaging would be more suitable to cases where short term trends do not pose significant risks. Five-year averaging would in any case exaggerate variability in cases of accelerating CR+NCF trends.
5. Downside variability	Square root of the sum of squared deviations of below trend CR+NCF. Countries that exhibit sharp downswings followed by gradual recoveries would gain relative to countries that have more symmetric fluctuations around trend.
6. Extreme variability	Focuses on periods of strong deviations (one standard deviation below trend). In theory may better capture situations that are likely to be associated with access to Fund resources. However, since it is based on a small number of observations it may be subject to discontinuities over time.
7. Extreme variability and a five-year trend	Same considerations as for the five-year trend and extreme variability. The use of five-year averaging would exaggerate variability in cases of accelerating CR+NCF trends, and the use of extreme observations only may subject the measure to discontinuities over time.
8. Variability(CR)+Variability(NCF)	Summing the variability of CR and NCF would not take into account their comovements. Therefore, members with capital movements that are procyclical to current receipts would see their shares decline with this measure.
9. Var(CA+NCF)*	Based on the notion that the variability of current account plus net capital flows is a proxy of external vulnerability. This measure would capture changes in reserves (and net errors and omissions) which are affected by a range of factors not related to potential need, including the members' exchange rate regime. Such a measure, by netting current receipts and payments, would also mask adjustments within the current account that may be relevant to

Table A1. Alternative Measures of Variability (Concluded) 1/

Volatility Based Measures:	
10. Volatility of GDP growth scaled up by GDP	Summary measure of the vulnerability to external and domestic shocks. As fluctuations in real income usually lead to fluctuations in absorption and the demand for imports, downward movements in real GDP are typically associated with an increased probability of need for balance of payments financing. Multiplication with MER GDP captures potential size of need. However, represents a fundamental departure from the current practice of only considering balance-of-payments-driven vulnerabilities.
11. Volatility of consumption growth scaled up by consumption	By taking into account fluctuations in real consumption growth, in principle this measure comes closer than GDP volatility to capturing shocks that are likely to exert pressure on imports and the balance of payments. Further, captures the fact that more developed countries have better mechanisms to reduce the effects of income volatility on expenditures, therefore allocating a larger share towards developing economies than the GDP volatility based measure. Has the disadvantage of lower data coverage than real GDP.
12. Extent of consumption risk sharing (Volatility of consumption growth relative to the volatility of GDP growth, scaled up by consumption)	Measures the extent to which the economy can smooth consumption in the face of income fluctuations; those that cannot are more likely to have a need to access Fund resources in cases of large income drops. Suffers from the same data availability problems as the consumption volatility measure. More importantly, the dispersion in the measure is low by construction, resulting in shares that are largely driven by economic size (after multiplying with consumption).
13. GDP growth volatility*	Proxy for the probability of need. Awards relatively large shares to EMDCs that have had crises in the past decade. However, this measure does not capture size.
Other Measures:	
14. Reweighing the variability of advanced vs. developing countries*	An ad-hoc adjustment to the current variability measure that attempts to reflect the fact that advanced economies have a stronger capacity to absorb BOP shocks. Multiplies the variability shares of advanced economies by a number (alpha) between zero and one, and the shares of other countries by a number that ensures that the shares add up to one hundred. Incrementing alpha by 0.1 shifts 6.27 pps to EMDCs under the current dataset. Setting alpha to 0.8 allocates variability shares about equally between advanced and EMDCs. Can be used to achieve an aggregate shift in the variability measure, but is necessarily arbitrary and would represent a major departure from historical practice in applying differential treatment to different country groups in the underlying data.
15. Var(CR+NCF)/External Assets*	This variable is in the spirit of adjusting the current measure to capture countries' differential capacity to absorb shocks. External assets (or net external assets) as a share of GDP is one measure of the ability to absorb and insure against external shocks. The empirical properties of this measure are not known, as the measure cannot be calculated given the lack of adequate data on international investment positions.
16. Var(CR+NCF)/Index of local financial market development*	This variable is in the spirit of adjusting the current measure to capture countries' differential capacity to absorb shocks. The extent to which local financial markets are developed is one measure of the ability to absorb and insure against external shocks. The empirical properties of this measure are not known, as the measure cannot be calculated given the lack of adequate data on local financial market development.

1/ Measures marked with an asterisk were not discussed in Appendix 1 of *Quota and Voice Reform—Stocktaking and Further Considerations* (2007).

Table A2. Alternative Measures of Variability – Shares of Variable 1/
(in percent)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Variability of Current Receipts Plus Net Capital Flows	Variability Scaled Down by GDP	Variability Scaled Down by Series Mean	Variability Scaled Down by GDP per capita	Variability Using 5-Year Moving Average	Downside Variability 2/	Extreme Variability 3/	Extreme Variability: With a 5-Year Moving Average 4/
Advanced economies	62.7	11.6	8.7	8.7	60.1	60.7	58.7	55.9
Major advanced economies	43.3	0.9	1.7	6.0	42.0	41.0	37.3	38.2
Of which: US	20.7	0.1	0.4	2.6	20.2	17.7	12.6	14.2
Other advanced economies	19.5	10.7	7.0	2.7	18.1	19.7	21.4	17.7
Emerging Market and Developing Countries	37.3	88.4	91.3	91.3	39.9	39.3	41.3	44.1
Developing countries	30.7	76.7	78.3	81.9	33.8	32.2	33.6	36.7
Africa	3.2	32.2	37.7	21.9	3.0	3.3	3.4	3.5
Asia 5/	13.5	19.0	14.4	37.8	15.9	13.9	14.7	17.0
Middle East, Malta & Turkey	6.2	10.8	10.6	11.7	5.9	6.6	6.7	6.6
Western Hemisphere	7.8	14.7	15.6	10.6	8.9	8.4	8.9	9.6
Transition economies	6.6	11.7	13.0	9.4	6.2	7.1	7.7	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Item:								
EU 27	31.3	12.5	9.0	6.3	27.8	32.8	35.2	30.2
LICs 6/	4.0	46.7	50.6	39.9	3.7	4.2	4.5	3.8

Source: Finance Department.

1/ Preliminary calculations based on 1993-2005 data. Reflects the impact of adjustments to current receipts for re-exports, international banking interest, and non-monetary gold.
2/ Measures the square root of the sum of squared differences from a centered 3-year moving average of below trend (3-year moving average) levels of current receipts plus net capital flows.
3/ Measures differences from a centered 3-year moving average for observations that are more than one standard deviation below the trend (3-year moving average). Like downside variability, it takes the square root of the sum of squared differences.
4/ Measures differences from a centered 5-year moving average for observations that are more than one standard deviation below the trend (5-year moving average). Like downside variability, it takes the square root of the sum of squared differences.
5/ Including Korea and Singapore.
6/ PRGF-eligible countries.

Table A3. Alternative Measures of Variability – Shares of Variable 1/

(in percent)

		(8)	(9)	(10)	(11)	(12)	(13)
	Variability of Current Receipts Plus Net Capital Flows	Variability of Current Receipts + Variability of Net Capital Flows 2/	Variability of Current Account Plus Net Capital Flows, 5-Year Moving Avg. 3/	Volatility of GDP Growth (scaled up by GDP) 4/	Volatility of Consumption Growth (scaled up by consumption) 5/	Consumption Growth Volatility Relative to GDP Growth Volatility (scaled up by consumption) 6/	Volatility of GDP Growth (unscaled) 7/
Advanced economies	62.7	59.6	60.5	52.1	45.7	70.3	5.4
Major advanced economies	43.3	40.3	41.5	42.6	35.7	55.9	1.1
Of which: US	20.7	15.5	17.4	20.2	16.1	23.5	0.2
Other advanced economies	19.5	19.4	19.0	9.5	10.1	14.4	4.3
Emerging Market and Developing Countries	37.3	40.4	39.5	47.9	54.3	29.7	94.6
Developing countries	30.7	32.9	33.3	36.5	43.2	24.9	69.6
Africa	3.2	3.5	4.0	3.0	6.0	3.7	35.6
Asia 8/	13.5	14.3	13.7	16.6	15.3	9.9	11.9
Middle East, Malta & Turkey	6.2	8.1	7.1	6.7	9.7	4.8	7.5
Western Hemisphere	7.8	7.0	8.5	10.1	12.2	6.5	14.7
Transition economies	6.6	7.5	6.2	11.4	11.0	4.8	25.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Item:							
EU 27	31.3	31.0	28.3	20.2	23.5	38.0	8.1
LICs 9/	4.0	4.3	5.0	4.3	7.3	5.2	45.7

Source: Finance Department.

1/ Preliminary calculations based on 1993-2005 data. GDP and consumption data are from the WEO database published in April 2007. Reflects the impact of adjustments to current receipts and current payments for re-exports, international banking interest, and non-monetary gold.
2/ Share of the sum of variability of current receipts plus variability of net capital flows.
3/ Variability of current account (current receipts less current payments) plus net capital flows based on a 5-year moving average.
4/ Measured as the standard deviation of real GDP growth in constant local currency units multiplied by average GDP from 2003-2005, for 175 countries with available data.
5/ Measured as the standard deviation of real consumption growth in constant local currency units multiplied by average consumption from 2003-2005, for 150 countries with available data.
6/ Calculated for 150 countries with available data on real GDP and real consumption.
7/ Measured as the standard deviation of real GDP growth in constant local currency units for 175 countries with available data.
8/ Including Korea and Singapore.
9/ PRGF-eligible countries.

INTERNATIONAL MONETARY FUND

Quota and Voice Reform—Key Elements of a Potential Package of Reforms Statistical Appendix

Prepared by the Quota and Voice Working Group[1]

Approved by David Burton

February 26, 2008

Contents Page

Tables

1a. Second Round Simulation – Illustration of Voting Shares – By Member.....................2
2a. Second Round Simulation – Illustration of Quota and Voting Shares – By Member ...8
3a. Second Round Simulation – Increases and Decreases in Quota and Voting Share – By Member 14
3b. Second Round Simulation – Members Receiving an Increase in Quota Share from Pre-Singapore Levels....................20
3c. Second Round Simulation – Members Receiving an Increase in Voting Share from Pre-Singapore Levels....................21

[1] Messrs. Burton (Chair), Ahmed, Anjaria, Edwards, Hagan, Kuhn, and Kincaid; a FIN team led by Mr. Tweedie has worked closely with the group.

Table 1a. Second Round Simulation – Illustration of Voting Shares – By Member 1/
(In percent)

			Post Second Round Ad Hoc Increases 2/	
	Pre First Round	Post First Round	Increase=10% 3/	Increase=11.5% 4/
United States	17.023	16.732	17.023	16.732
Japan	6.108	6.003	6.108	6.227
Germany	5.968	5.866	5.922	5.805
France	4.929	4.844	4.415	4.288
United Kingdom	4.929	4.844	4.415	4.288
China 5/	2.928	3.652	4.006	3.807
Italy	3.242	3.187	3.208	3.155
Saudi Arabia	3.210	3.155	2.879	2.800
Canada	2.928	2.878	2.627	2.555
Russia	2.734	2.687	2.453	2.387
Netherlands	2.375	2.335	2.133	2.077
Belgium	2.120	2.084	1.905	1.856
India	1.916	1.883	1.909	2.338
Switzerland	1.595	1.568	1.436	1.401
Australia	1.494	1.468	1.345	1.313
Mexico	1.196	1.430	1.434	1.467
Spain	1.408	1.384	1.681	1.625
Brazil	1.402	1.378	1.487	1.715
Korea	0.760	1.329	1.242	1.365
Venezuela	1.229	1.208	1.109	1.084
Sweden	1.108	1.089	1.001	0.980
Argentina	0.981	0.964	0.887	0.869
Indonesia	0.964	0.947	0.871	0.854
Austria	0.869	0.854	0.875	0.868
South Africa	0.867	0.852	0.785	0.771
Nigeria	0.814	0.800	0.738	0.725
Norway	0.777	0.764	0.782	0.777
Denmark	0.764	0.751	0.788	0.780
Iran	0.697	0.685	0.633	0.623
Malaysia	0.692	0.680	0.743	0.733
Kuwait	0.644	0.633	0.586	0.577
Ukraine	0.640	0.629	0.582	0.574
Poland	0.638	0.627	0.711	0.699
Finland	0.590	0.580	0.538	0.531
Algeria	0.586	0.576	0.534	0.527

Table 1a. Second Round Simulation – Illustration of Voting Shares – By Member 1/ (continued)
(In percent)

			Post Second Round Ad Hoc Increases 2/	
	Pre First Round	Post First Round	Increase=10% 3/	Increase=11.5% 4/
Turkey	0.453	0.547	0.630	0.607
Iraq	0.556	0.546	0.507	0.501
Libya	0.526	0.517	0.480	0.475
Thailand	0.507	0.498	0.616	0.601
Hungary	0.487	0.479	0.445	0.441
Pakistan	0.485	0.477	0.443	0.440
Romania	0.483	0.475	0.442	0.438
Egypt	0.444	0.436	0.407	0.404
Israel	0.437	0.429	0.450	0.450
New Zealand	0.421	0.414	0.387	0.384
Philippines	0.414	0.407	0.434	0.434
Portugal	0.409	0.402	0.440	0.438
Singapore	0.406	0.399	0.615	0.588
Chile	0.403	0.397	0.371	0.369
Ireland	0.395	0.389	0.654	0.528
Greece	0.388	0.382	0.476	0.467
Czech Republic	0.387	0.380	0.430	0.427
Colombia	0.366	0.360	0.337	0.337
Bulgaria	0.305	0.299	0.282	0.284
Peru	0.304	0.299	0.282	0.283
United Arab Emirates	0.292	0.287	0.328	0.328
Morocco	0.281	0.276	0.261	0.263
Bangladesh	0.256	0.251	0.239	0.241
Congo, Dem. Republic of	0.256	0.251	0.239	0.241
Zambia	0.235	0.231	0.221	0.224
Serbia	0.226	0.222	0.212	0.215
Sri Lanka	0.201	0.197	0.190	0.194
Belarus	0.188	0.185	0.179	0.183
Ghana	0.180	0.177	0.171	0.176
Kazakhstan	0.179	0.176	0.194	0.199
Croatia	0.179	0.176	0.170	0.175
Slovak Republic	0.175	0.172	0.195	0.199
Zimbabwe	0.173	0.170	0.165	0.170
Trinidad and Tobago	0.165	0.162	0.158	0.163
Vietnam	0.162	0.159	0.194	0.212

Table 1a. Second Round Simulation – Illustration of Voting Shares – By Member 1/ (continued)
(In percent)

			Post Second Round Ad Hoc Increases 2/	
	Pre First Round	Post First Round	Increase=10% 3/	Increase=11.5% 4/
Cote d'Ivoire	0.160	0.158	0.154	0.159
Sudan	0.156	0.153	0.149	0.155
Uruguay	0.152	0.149	0.146	0.151
Ecuador	0.150	0.147	0.162	0.168
Syrian Arab Republic	0.146	0.143	0.162	0.167
Tunisia	0.143	0.140	0.138	0.143
Angola	0.143	0.140	0.138	0.143
Luxembourg	0.139	0.137	0.308	0.196
Uzbekistan	0.138	0.135	0.133	0.139
Jamaica	0.137	0.134	0.132	0.138
Kenya	0.136	0.133	0.132	0.137
Qatar	0.132	0.130	0.143	0.150
Myanmar	0.130	0.128	0.126	0.132
Yemen, Republic of	0.123	0.121	0.120	0.126
Slovenia	0.118	0.116	0.132	0.139
Dominican Republic	0.112	0.110	0.110	0.117
Brunei Darussalam	0.110	0.108	0.109	0.115
Guatemala	0.108	0.106	0.106	0.113
Panama	0.106	0.104	0.105	0.112
Lebanon	0.104	0.103	0.130	0.135
Tanzania	0.103	0.101	0.102	0.109
Oman	0.100	0.099	0.117	0.124
Cameroon	0.096	0.095	0.096	0.103
Uganda	0.094	0.092	0.094	0.101
Bolivia	0.090	0.088	0.091	0.098
El Salvador	0.090	0.088	0.091	0.098
Jordan	0.090	0.088	0.090	0.097
Bosnia-Herzegovina	0.089	0.087	0.090	0.097
Costa Rica	0.087	0.085	0.096	0.104
Islamic Republic of Afghanistan	0.086	0.084	0.087	0.094
Senegal	0.086	0.084	0.087	0.094
Azerbaijan	0.085	0.084	0.086	0.094
Gabon	0.082	0.081	0.084	0.091
Georgia	0.080	0.079	0.082	0.089
Lithuania	0.077	0.076	0.096	0.103

Table 1a. Second Round Simulation – Illustration of Voting Shares – By Member 1/ (continued)
(In percent)

			Post Second Round Ad Hoc Increases 2/	
	Pre First Round	Post First Round	Increase=10% 3/	Increase=11.5% 4/
Cyprus	0.075	0.074	0.084	0.092
Namibia	0.074	0.073	0.076	0.084
Bahrain	0.073	0.072	0.093	0.100
Ethiopia	0.073	0.071	0.075	0.083
Papua New Guinea	0.072	0.070	0.074	0.082
Bahamas, The	0.071	0.070	0.074	0.081
Nicaragua	0.071	0.070	0.074	0.081
Honduras	0.071	0.070	0.073	0.081
Liberia	0.071	0.069	0.073	0.081
Latvia	0.070	0.068	0.078	0.086
Moldova	0.068	0.067	0.071	0.079
Madagascar	0.067	0.066	0.070	0.078
Iceland	0.065	0.064	0.069	0.076
Mozambique	0.063	0.062	0.067	0.075
Guinea	0.060	0.059	0.064	0.072
Sierra Leone	0.059	0.058	0.063	0.071
Malta	0.058	0.057	0.062	0.070
Mauritius	0.058	0.057	0.062	0.070
Paraguay	0.057	0.056	0.061	0.069
Mali	0.054	0.053	0.059	0.067
Suriname	0.054	0.053	0.058	0.066
Armenia	0.054	0.053	0.058	0.066
Guyana	0.053	0.052	0.058	0.066
Kyrgyz Republic	0.052	0.051	0.057	0.065
Cambodia	0.052	0.051	0.056	0.064
Tajikistan	0.051	0.050	0.056	0.064
Congo, Republic of	0.050	0.049	0.055	0.063
Haiti	0.049	0.048	0.054	0.062
Somalia	0.049	0.048	0.054	0.062
Rwanda	0.048	0.047	0.053	0.061
Burundi	0.047	0.046	0.052	0.060
Turkmenistan	0.046	0.045	0.061	0.069
Togo	0.045	0.044	0.050	0.059
Nepal	0.044	0.043	0.050	0.058
Fiji	0.044	0.043	0.049	0.058

Table 1a. Second Round Simulation – Illustration of Voting Shares – By Member 1/ (continued)
(In percent)

			Post Second Round Ad Hoc Increases 2/	
	Pre First Round	Post First Round	Increase=10% 3/	Increase=11.5% 4/
Malawi	0.043	0.042	0.049	0.057
Macedonia, FYR	0.043	0.042	0.049	0.057
Barbados	0.042	0.042	0.048	0.057
Niger	0.042	0.041	0.047	0.056
Estonia	0.041	0.041	0.060	0.067
Mauritania	0.041	0.040	0.047	0.055
Botswana	0.040	0.040	0.057	0.065
Benin	0.040	0.039	0.046	0.054
Burkina Faso	0.039	0.038	0.045	0.054
Chad	0.037	0.036	0.048	0.056
Central African Republic	0.037	0.036	0.043	0.052
Lao, People's Dem. Republic	0.036	0.035	0.042	0.051
Mongolia	0.035	0.034	0.041	0.050
Swaziland	0.035	0.034	0.041	0.050
Albania	0.034	0.033	0.045	0.054
Lesotho	0.027	0.027	0.035	0.044
Equatorial Guinea	0.026	0.026	0.042	0.050
Gambia, The	0.026	0.025	0.033	0.042
Montenegro	0.024	0.024	0.032	0.041
Belize	0.020	0.020	0.028	0.037
San Marino	0.019	0.019	0.030	0.039
Vanuatu	0.019	0.019	0.027	0.036
Djibouti	0.019	0.018	0.027	0.036
Eritrea	0.019	0.018	0.028	0.037
St. Lucia	0.018	0.018	0.027	0.036
Guinea-Bissau	0.018	0.018	0.026	0.035
Antigua and Barbuda	0.018	0.017	0.026	0.035
Grenada	0.017	0.017	0.025	0.034
Samoa	0.017	0.016	0.025	0.034
Solomon Islands	0.016	0.016	0.025	0.034
Cape Verde	0.016	0.016	0.025	0.034
Comoros	0.016	0.015	0.024	0.033
St. Kitts and Nevis	0.016	0.015	0.024	0.033
Seychelles	0.015	0.015	0.025	0.034
St. Vincent and the Grenadines	0.015	0.015	0.024	0.033

Table 1a. Second Round Simulation – Illustration of Voting Shares – By Member 1/ (concluded)
(In percent)

	Pre First Round	Post First Round	Post Second Round Ad Hoc Increases 2/	
			Increase=10% 3/	Increase=11.5% 4/
Dominica	0.015	0.015	0.024	0.033
Maldives	0.015	0.015	0.025	0.034
Timor-Leste	0.015	0.015	0.025	0.034
Sao Tome and Principe	0.015	0.015	0.023	0.033
Tonga	0.015	0.014	0.023	0.032
Bhutan	0.014	0.014	0.024	0.033
Kiribati	0.014	0.014	0.023	0.032
Micronesia, Fed. States of	0.014	0.014	0.023	0.032
Marshall Islands	0.013	0.013	0.022	0.031
Palau, Republic of	0.013	0.013	0.022	0.031

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^K. GDP blended using 60 percent market and 40 percent PPP exchange rates. K is a compression factor of 0.95. Simulations assume an overall increase (first and second rounds combined) as indicated above; and uniform proportional reduction of out-of-lineness, based on members' pre-Singapore quota shares. Takes into account the first round ad hoc increases provided to four members.
3/ Assumes foregoing by eligible G-7 members to their pre-Singapore voting shares if possible and a doubling of basic votes.
4/ Includes the following additional elements: U.S. foregoing to post-Singapore voting share if possible and application of the U.S. reduction factor to other eligible G-7 members; a tripling of basic votes; a minimum 15 percent increase in post-Singapore nominal quota for first round ad hoc increase recipients; a maximum 50 percent quota increase for advanced economies; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
5/ Includes China, P.R., and Hong Kong SAR.

Table 2a. Second Round Simulation – Illustration of Quota and Voting Shares – By Member 1/
(In percent)

	Calculated Quota Shares		Quota Shares			Voting Shares		
	Existing Five Formulas	New Formula 2/	Pre First Round	Post First Round	Post Second Round 2/ 3/	Pre First Round	Post First Round	Post Second Round 2/ 3/
United States	16.284	18.991	17.380	17.076	17.674	17.023	16.732	16.732
Japan	7.011	8.032	6.228	6.119	6.558	6.108	6.003	6.227
Germany	6.850	6.227	6.086	5.979	6.112	5.968	5.866	5.805
France	4.129	4.016	5.024	4.936	4.506	4.929	4.844	4.288
United Kingdom	5.240	4.429	5.024	4.936	4.506	4.929	4.844	4.288
China 4/	6.137	6.390	2.980	3.719	3.997	2.928	3.652	3.807
Italy	3.317	3.336	3.301	3.243	3.307	3.242	3.187	3.155
Saudi Arabia	1.030	0.835	3.268	3.211	2.931	3.210	3.155	2.800
Canada	3.065	2.569	2.980	2.928	2.672	2.928	2.878	2.555
Russia	1.702	2.053	2.782	2.733	2.495	2.734	2.687	2.387
Netherlands	2.897	1.930	2.415	2.373	2.166	2.375	2.335	2.077
Belgium	2.270	1.504	2.155	2.117	1.932	2.120	2.084	1.856
India	1.287	1.997	1.945	1.911	2.443	1.916	1.883	2.338
Switzerland	1.485	1.211	1.618	1.590	1.451	1.595	1.568	1.401
Australia	1.205	1.321	1.514	1.488	1.358	1.494	1.468	1.313
Mexico	1.841	1.970	1.210	1.449	1.521	1.196	1.430	1.467
Spain	2.237	2.304	1.426	1.401	1.688	1.408	1.384	1.625
Brazil	1.069	1.725	1.420	1.396	1.783	1.402	1.378	1.715
Korea	2.512	2.245	0.764	1.346	1.413	0.760	1.329	1.365
Venezuela	0.427	0.428	1.244	1.222	1.116	1.229	1.208	1.084
Sweden	1.172	0.993	1.121	1.101	1.005	1.108	1.089	0.980
Argentina	0.368	0.583	0.990	0.973	0.888	0.981	0.964	0.869
Indonesia	0.737	0.901	0.973	0.956	0.872	0.964	0.947	0.854
Austria	1.129	0.913	0.876	0.861	0.887	0.869	0.854	0.868
South Africa	0.459	0.589	0.874	0.859	0.784	0.867	0.852	0.771
Nigeria	0.359	0.337	0.820	0.806	0.736	0.814	0.800	0.725
Norway	0.860	0.810	0.782	0.768	0.790	0.777	0.764	0.777
Denmark	1.040	0.853	0.769	0.755	0.794	0.764	0.751	0.780
Iran	0.435	0.594	0.700	0.688	0.628	0.697	0.685	0.623
Malaysia	1.374	0.859	0.695	0.683	0.744	0.692	0.680	0.733
Kuwait	0.355	0.257	0.646	0.635	0.579	0.644	0.633	0.577
Ukraine	0.301	0.338	0.642	0.631	0.576	0.640	0.629	0.574
Poland	0.779	0.868	0.640	0.629	0.708	0.638	0.627	0.699
Finland	0.529	0.545	0.591	0.581	0.530	0.590	0.580	0.531
Algeria	0.340	0.374	0.587	0.577	0.526	0.586	0.576	0.527

Table 2a. Second Round Simulation – Illustration of Quota and Voting Shares – By Member 1/ (continued)
(In percent)

	Calculated Quota Shares		Quota Shares			Voting Shares		
	Existing Five Formulas	New Formula 2/	Pre First Round	Post First Round	Post Second Round 2/ 3/	Pre First Round	Post First Round	Post Second Round 2/ 3/
Turkey	0.751	0.987	0.451	0.548	0.611	0.453	0.547	0.607
Iraq	0.278	0.225	0.556	0.546	0.499	0.556	0.546	0.501
Libya	0.243	0.215	0.526	0.517	0.471	0.526	0.517	0.475
Thailand	0.909	0.836	0.506	0.497	0.604	0.507	0.498	0.601
Hungary	0.489	0.433	0.486	0.477	0.436	0.487	0.479	0.441
Pakistan	0.196	0.356	0.484	0.475	0.434	0.485	0.477	0.440
Romania	0.248	0.302	0.482	0.474	0.432	0.483	0.475	0.438
Egypt	0.253	0.382	0.442	0.434	0.396	0.444	0.436	0.404
Israel	0.544	0.471	0.434	0.427	0.445	0.437	0.429	0.450
New Zealand	0.239	0.263	0.419	0.411	0.375	0.421	0.414	0.384
Philippines	0.473	0.465	0.412	0.404	0.428	0.414	0.407	0.434
Portugal	0.481	0.494	0.406	0.399	0.432	0.409	0.402	0.438
Singapore	1.929	1.031	0.404	0.396	0.591	0.406	0.399	0.588
Chile	0.326	0.350	0.401	0.394	0.359	0.403	0.397	0.369
Ireland	1.660	1.173	0.392	0.385	0.528	0.395	0.389	0.528
Greece	0.485	0.644	0.385	0.378	0.462	0.388	0.382	0.467
Czech Republic	0.585	0.508	0.383	0.377	0.421	0.387	0.380	0.427
Colombia	0.219	0.326	0.362	0.356	0.325	0.366	0.360	0.337
Bulgaria	0.125	0.137	0.300	0.294	0.269	0.305	0.299	0.284
Peru	0.149	0.241	0.299	0.293	0.268	0.304	0.299	0.283
United Arab Emirates	0.508	0.385	0.286	0.281	0.316	0.292	0.287	0.328
Morocco	0.165	0.186	0.275	0.270	0.247	0.281	0.276	0.263
Bangladesh	0.099	0.173	0.250	0.245	0.224	0.256	0.251	0.241
Congo, Dem. Republic of	0.023	0.028	0.249	0.245	0.224	0.256	0.251	0.241
Zambia	0.027	0.034	0.229	0.225	0.205	0.235	0.231	0.224
Serbia	0.085	0.099	0.219	0.215	0.196	0.226	0.222	0.215
Sri Lanka	0.070	0.090	0.193	0.190	0.173	0.201	0.197	0.194
Belarus	0.116	0.121	0.181	0.178	0.162	0.188	0.185	0.183
Ghana	0.042	0.050	0.173	0.170	0.155	0.180	0.177	0.176
Kazakhstan	0.189	0.199	0.171	0.168	0.179	0.179	0.176	0.199
Croatia	0.149	0.154	0.171	0.168	0.153	0.179	0.176	0.175
Slovak Republic	0.247	0.208	0.167	0.164	0.179	0.175	0.172	0.199
Zimbabwe	0.023	0.020	0.165	0.162	0.148	0.173	0.170	0.170
Trinidad and Tobago	0.064	0.059	0.157	0.154	0.141	0.165	0.162	0.163
Vietnam	0.235	0.230	0.154	0.151	0.193	0.162	0.159	0.212

Table 2a. Second Round Simulation – Illustration of Quota and Voting Shares – By Member 1/ (continued)
(In percent)

	Calculated Quota Shares		Quota Shares			Voting Shares		
	Existing Five Formulas	New Formula 2/	Pre First Round	Post First Round	Post Second Round 2/ 3/	Pre First Round	Post First Round	Post Second Round 2/ 3/
Cote d'Ivoire	0.060	0.061	0.152	0.149	0.136	0.160	0.158	0.159
Sudan	0.046	0.075	0.147	0.145	0.132	0.156	0.153	0.155
Uruguay	0.048	0.073	0.143	0.141	0.129	0.152	0.149	0.151
Ecuador	0.083	0.157	0.141	0.139	0.146	0.150	0.147	0.168
Syrian Arab Republic	0.114	0.165	0.137	0.135	0.146	0.146	0.143	0.167
Tunisia	0.106	0.117	0.134	0.132	0.120	0.143	0.140	0.143
Angola	0.156	0.134	0.134	0.132	0.120	0.143	0.140	0.143
Luxembourg	1.369	0.624	0.131	0.128	0.176	0.139	0.137	0.196
Uzbekistan	0.043	0.065	0.129	0.127	0.116	0.138	0.135	0.139
Jamaica	0.048	0.053	0.128	0.126	0.115	0.137	0.134	0.138
Kenya	0.037	0.065	0.127	0.125	0.114	0.136	0.133	0.137
Qatar	0.136	0.135	0.123	0.121	0.127	0.132	0.130	0.150
Myanmar	0.031	0.049	0.121	0.119	0.108	0.130	0.128	0.132
Yemen, Republic of	0.110	0.110	0.114	0.112	0.102	0.123	0.121	0.126
Slovenia	0.148	0.132	0.108	0.107	0.115	0.118	0.116	0.139
Dominican Republic	0.090	0.100	0.102	0.101	0.092	0.112	0.110	0.117
Brunei Darussalam	0.050	0.041	0.101	0.099	0.090	0.110	0.108	0.115
Guatemala	0.066	0.095	0.098	0.097	0.088	0.108	0.106	0.113
Panama	0.048	0.065	0.097	0.095	0.087	0.106	0.104	0.112
Lebanon	0.182	0.151	0.095	0.093	0.112	0.104	0.103	0.135
Tanzania	0.034	0.044	0.093	0.091	0.083	0.103	0.101	0.109
Oman	0.145	0.120	0.091	0.089	0.099	0.100	0.099	0.124
Cameroon	0.032	0.063	0.087	0.085	0.078	0.096	0.095	0.103
Uganda	0.025	0.035	0.084	0.083	0.076	0.094	0.092	0.101
Bolivia	0.023	0.041	0.080	0.079	0.072	0.090	0.088	0.098
El Salvador	0.060	0.068	0.080	0.079	0.072	0.090	0.088	0.098
Jordan	0.080	0.073	0.080	0.078	0.072	0.090	0.088	0.097
Bosnia-Herzegovina	0.064	0.056	0.079	0.078	0.071	0.089	0.087	0.097
Costa Rica	0.078	0.083	0.077	0.075	0.079	0.087	0.085	0.104
Islamic Republic of Afghanistan	0.041	0.038	0.076	0.074	0.068	0.086	0.084	0.094
Senegal	0.024	0.032	0.076	0.074	0.068	0.086	0.084	0.094
Azerbaijan	0.050	0.051	0.075	0.074	0.068	0.085	0.084	0.094
Gabon	0.041	0.039	0.072	0.071	0.065	0.082	0.081	0.091
Georgia	0.019	0.025	0.070	0.069	0.063	0.080	0.079	0.089
Lithuania	0.101	0.100	0.067	0.066	0.077	0.077	0.076	0.103

Table 2a. Second Round Simulation – Illustration of Quota and Voting Shares – By Member 1/ (continued)
(In percent)

	Calculated Quota Shares		Quota Shares			Voting Shares		
	Existing Five Formulas	New Formula 2/	Pre First Round	Post First Round	Post Second Round 2/ 3/	Pre First Round	Post First Round	Post Second Round 2/ 3/
Cyprus	0.063	0.069	0.065	0.064	0.066	0.075	0.074	0.092
Namibia	0.023	0.023	0.064	0.063	0.057	0.074	0.073	0.084
Bahrain	0.142	0.100	0.063	0.062	0.074	0.073	0.072	0.100
Ethiopia	0.024	0.047	0.063	0.061	0.056	0.073	0.071	0.083
Papua New Guinea	0.028	0.026	0.062	0.060	0.055	0.072	0.070	0.082
Bahamas, The	0.027	0.025	0.061	0.060	0.055	0.071	0.070	0.081
Nicaragua	0.020	0.027	0.061	0.060	0.055	0.071	0.070	0.081
Honduras	0.038	0.042	0.061	0.060	0.054	0.071	0.070	0.081
Liberia	0.005	0.008	0.060	0.059	0.054	0.071	0.069	0.081
Latvia	0.058	0.060	0.059	0.058	0.060	0.070	0.068	0.086
Moldova	0.018	0.018	0.058	0.057	0.052	0.068	0.067	0.079
Madagascar	0.015	0.024	0.057	0.056	0.051	0.067	0.066	0.078
Iceland	0.039	0.043	0.055	0.054	0.049	0.065	0.064	0.076
Mozambique	0.025	0.027	0.053	0.052	0.048	0.063	0.062	0.075
Guinea	0.009	0.015	0.050	0.049	0.045	0.060	0.059	0.072
Sierra Leone	0.004	0.006	0.049	0.048	0.044	0.059	0.058	0.071
Malta	0.053	0.039	0.048	0.047	0.043	0.058	0.057	0.070
Mauritius	0.030	0.031	0.048	0.047	0.043	0.058	0.057	0.070
Paraguay	0.037	0.043	0.047	0.046	0.042	0.057	0.056	0.069
Mali	0.014	0.021	0.044	0.043	0.039	0.054	0.053	0.067
Suriname	0.010	0.010	0.043	0.042	0.039	0.054	0.053	0.066
Armenia	0.013	0.018	0.043	0.042	0.039	0.054	0.053	0.066
Guyana	0.010	0.008	0.043	0.042	0.038	0.053	0.052	0.066
Kyrgyz Republic	0.010	0.014	0.042	0.041	0.037	0.052	0.051	0.065
Cambodia	0.031	0.032	0.041	0.040	0.037	0.052	0.051	0.064
Tajikistan	0.011	0.014	0.041	0.040	0.037	0.051	0.050	0.064
Congo, Republic of	0.032	0.029	0.040	0.039	0.035	0.050	0.049	0.063
Haiti	0.012	0.018	0.038	0.038	0.034	0.049	0.048	0.062
Somalia	0.002	0.002	0.038	0.038	0.034	0.049	0.048	0.062
Rwanda	0.006	0.011	0.037	0.037	0.034	0.048	0.047	0.061
Burundi	0.003	0.004	0.036	0.035	0.032	0.047	0.046	0.060
Turkmenistan	0.046	0.056	0.035	0.035	0.041	0.046	0.045	0.069
Togo	0.008	0.011	0.034	0.034	0.031	0.045	0.044	0.059
Nepal	0.020	0.033	0.033	0.033	0.030	0.044	0.043	0.058
Fiji	0.011	0.011	0.033	0.032	0.029	0.044	0.043	0.058

Table 2a. Second Round Simulation – Illustration of Quota and Voting Shares – By Member 1/ (continued)
(In percent)

	Calculated Quota Shares		Quota Shares			Voting Shares		
	Existing Five Formulas	New Formula 2/	Pre First Round	Post First Round	Post Second Round 2/ 3/	Pre First Round	Post First Round	Post Second Round 2/ 3/
Malawi	0.006	0.010	0.032	0.032	0.029	0.043	0.042	0.057
Macedonia, FYR	0.027	0.030	0.032	0.032	0.029	0.043	0.042	0.057
Barbados	0.014	0.016	0.032	0.031	0.028	0.042	0.042	0.057
Niger	0.007	0.012	0.031	0.030	0.028	0.042	0.041	0.056
Estonia	0.072	0.060	0.031	0.030	0.039	0.041	0.041	0.067
Mauritania	0.007	0.009	0.030	0.030	0.027	0.041	0.040	0.055
Botswana	0.051	0.054	0.029	0.029	0.037	0.040	0.040	0.065
Benin	0.009	0.015	0.029	0.028	0.026	0.040	0.039	0.054
Burkina Faso	0.010	0.019	0.028	0.028	0.025	0.039	0.038	0.054
Chad	0.024	0.032	0.026	0.026	0.028	0.037	0.036	0.056
Central African Republic	0.003	0.006	0.026	0.026	0.023	0.037	0.036	0.052
Lao, People's Dem. Republic	0.007	0.013	0.025	0.024	0.022	0.036	0.035	0.051
Mongolia	0.010	0.012	0.024	0.023	0.021	0.035	0.034	0.050
Swaziland	0.020	0.018	0.024	0.023	0.021	0.035	0.034	0.050
Albania	0.027	0.031	0.023	0.022	0.025	0.034	0.033	0.054
Lesotho	0.011	0.010	0.016	0.016	0.015	0.027	0.027	0.044
Equatorial Guinea	0.041	0.038	0.015	0.015	0.022	0.026	0.026	0.050
Gambia, The	0.002	0.003	0.015	0.014	0.013	0.026	0.025	0.042
Montenegro	0.009	0.010	0.013	0.013	0.012	0.024	0.024	0.041
Belize	0.006	0.006	0.009	0.009	0.008	0.020	0.020	0.037
San Marino	0.020	0.013	0.008	0.008	0.009	0.019	0.019	0.039
Vanuatu	0.003	0.003	0.008	0.008	0.007	0.019	0.019	0.036
Djibouti	0.003	0.005	0.007	0.007	0.007	0.019	0.018	0.036
Eritrea	0.008	0.008	0.007	0.007	0.008	0.019	0.018	0.037
St. Lucia	0.004	0.004	0.007	0.007	0.006	0.018	0.018	0.036
Guinea-Bissau	0.004	0.004	0.007	0.007	0.006	0.018	0.018	0.035
Antigua and Barbuda	0.006	0.005	0.006	0.006	0.006	0.018	0.017	0.035
Grenada	0.003	0.003	0.005	0.005	0.005	0.017	0.017	0.034
Samoa	0.002	0.003	0.005	0.005	0.005	0.017	0.016	0.034
Solomon Islands	0.003	0.003	0.005	0.005	0.004	0.016	0.016	0.034
Cape Verde	0.004	0.005	0.004	0.004	0.005	0.016	0.016	0.034
Comoros	0.001	0.002	0.004	0.004	0.004	0.016	0.015	0.033
St. Kitts and Nevis	0.002	0.002	0.004	0.004	0.004	0.016	0.015	0.033
Seychelles	0.005	0.006	0.004	0.004	0.005	0.015	0.015	0.034
St. Vincent and the Grenadines	0.002	0.003	0.004	0.004	0.003	0.015	0.015	0.033

Table 2a. Second Round Simulation – Illustration of Quota and Voting Shares – By Member 1/ (concluded)
(In percent)

	Calculated Quota Shares		Quota Shares			Voting Shares		
	Existing Five Formulas	New Formula 2/	Pre First Round	Post First Round	Post Second Round 2/ 3/	Pre First Round	Post First Round	Post Second Round 2/ 3/
Dominica	0.002	0.002	0.004	0.004	0.003	0.015	0.015	0.033
Maldives	0.005	0.005	0.004	0.004	0.004	0.015	0.015	0.034
Timor-Leste	0.007	0.006	0.004	0.004	0.005	0.015	0.015	0.034
Sao Tome and Principe	0.000	0.001	0.003	0.003	0.003	0.015	0.015	0.033
Tonga	0.001	0.002	0.003	0.003	0.003	0.015	0.014	0.032
Bhutan	0.004	0.005	0.003	0.003	0.004	0.014	0.014	0.033
Kiribati	0.003	0.002	0.003	0.003	0.002	0.014	0.014	0.032
Micronesia, Fed. States of	0.002	0.002	0.002	0.002	0.002	0.014	0.014	0.032
Marshall Islands	0.001	0.001	0.002	0.002	0.001	0.013	0.013	0.031
Palau, Republic of	0.001	0.002	0.001	0.001	0.001	0.013	0.013	0.031

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^K. GDP blended using 60 percent market and 40 percent PPP exchange rates. K is a compression factor of 0.95.
3/ Simulation assumes an overall increase of 11.5 percent (first and second rounds combined); U.S. foregoing to its post-Singapore voting share and application of the U.S. reduction factor to other eligible G-7 members; 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; minimum 15 percent increase in post-Singapore nominal quota for these four countries; a maximum 50 percent quota increase for advanced countries; a tripling of basic votes; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
4/ Includes China, P.R., and Hong Kong SAR.

Table 3a. Second Round Simulation – Increases and Decreases in Quota and Voting Shares – By Member 1/ 2/
(In percentage points)

Country	Quota Share: From pre-Singapore to post-Singapore	Quota Share: From post-Singapore to post second round	Quota Share: From pre-Singapore to post second round	Voting Share: From pre-Singapore to post-Singapore	Voting Share: From post-Singapore to post second round	Voting Share: From pre-Singapore to post second round
United States	-0.304	0.598	0.294	-0.292	0.000	-0.292
Japan	-0.109	0.438	0.329	-0.105	0.223	0.119
Germany	-0.107	0.132	0.026	-0.102	-0.061	-0.163
France	-0.088	-0.430	-0.518	-0.084	-0.557	-0.641
United Kingdom	-0.088	-0.430	-0.518	-0.084	-0.557	-0.641
China 3/	0.739	0.278	1.017	0.724	0.154	0.879
Italy	-0.058	0.064	0.006	-0.056	-0.032	-0.087
Saudi Arabia	-0.057	-0.280	-0.337	-0.055	-0.356	-0.411
Canada	-0.052	-0.255	-0.307	-0.050	-0.323	-0.373
Russia	-0.049	-0.238	-0.287	-0.047	-0.300	-0.347
Netherlands	-0.042	-0.207	-0.249	-0.041	-0.258	-0.299
Belgium	-0.038	-0.184	-0.222	-0.036	-0.228	-0.265
India	-0.034	0.531	0.497	-0.033	0.455	0.422
Switzerland	-0.028	-0.139	-0.167	-0.027	-0.167	-0.194
Australia	-0.027	-0.130	-0.156	-0.026	-0.155	-0.181
Mexico	0.239	0.072	0.312	0.235	0.037	0.272
Spain	-0.025	0.287	0.262	-0.024	0.242	0.217
Brazil	-0.025	0.388	0.363	-0.024	0.337	0.313
Korea	0.581	0.067	0.648	0.569	0.036	0.605
Venezuela	-0.022	-0.107	-0.128	-0.021	-0.124	-0.145
Sweden	-0.020	-0.096	-0.116	-0.019	-0.110	-0.129
Argentina	-0.017	-0.085	-0.102	-0.017	-0.095	-0.112
Indonesia	-0.017	-0.083	-0.100	-0.017	-0.093	-0.109
Austria	-0.015	0.026	0.011	-0.015	0.014	-0.001
South Africa	-0.015	-0.075	-0.090	-0.015	-0.082	-0.096
Nigeria	-0.014	-0.070	-0.085	-0.014	-0.075	-0.089
Norway	-0.014	0.022	0.008	-0.013	0.013	0.000
Denmark	-0.013	0.039	0.025	-0.013	0.029	0.016
Iran	-0.012	-0.060	-0.072	-0.012	-0.062	-0.074
Malaysia	-0.012	0.061	0.049	-0.012	0.053	0.041
Kuwait	-0.011	-0.055	-0.067	-0.011	-0.056	-0.067
Ukraine	-0.011	-0.055	-0.066	-0.011	-0.055	-0.066
Poland	-0.011	0.079	0.068	-0.011	0.072	0.061
Finland	-0.010	-0.051	-0.061	-0.010	-0.049	-0.059
Algeria	-0.010	-0.050	-0.061	-0.010	-0.049	-0.059

Table 3a. Second Round Simulation – Increases and Decreases in Quota and Voting Shares – By Member 1/ 2/ (continued)
(In percentage points)

	Quota Share			Voting Share		
Country	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round
Turkey	0.097	0.063	0.160	0.095	0.060	0.154
Iraq	-0.010	-0.048	-0.057	-0.010	-0.045	-0.055
Libya	-0.009	-0.045	-0.054	-0.009	-0.042	-0.051
Thailand	-0.009	0.107	0.098	-0.009	0.103	0.094
Hungary	-0.009	-0.042	-0.050	-0.008	-0.037	-0.045
Pakistan	-0.008	-0.041	-0.050	-0.008	-0.037	-0.045
Romania	-0.008	-0.041	-0.050	-0.008	-0.037	-0.045
Egypt	-0.008	-0.038	-0.046	-0.008	-0.032	-0.040
Israel	-0.008	0.019	0.011	-0.007	0.021	0.014
New Zealand	-0.007	-0.036	-0.043	-0.007	-0.029	-0.037
Philippines	-0.007	0.023	0.016	-0.007	0.027	0.020
Portugal	-0.007	0.033	0.026	-0.007	0.036	0.029
Singapore	-0.007	0.194	0.187	-0.007	0.189	0.182
Chile	-0.007	-0.034	-0.041	-0.007	-0.027	-0.034
Ireland	-0.007	0.142	0.135	-0.007	0.140	0.133
Greece	-0.007	0.084	0.077	-0.007	0.085	0.078
Czech Republic	-0.007	0.044	0.037	-0.007	0.047	0.040
Colombia	-0.006	-0.031	-0.037	-0.006	-0.023	-0.029
Bulgaria	-0.005	-0.026	-0.031	-0.005	-0.016	-0.021
Peru	-0.005	-0.026	-0.031	-0.005	-0.016	-0.021
United Arab Emirates	-0.005	0.035	0.030	-0.005	0.042	0.037
Morocco	-0.005	-0.024	-0.028	-0.005	-0.013	-0.018
Bangladesh	-0.004	-0.021	-0.026	-0.004	-0.010	-0.014
Congo, Dem. Republic of	-0.004	-0.021	-0.026	-0.004	-0.010	-0.014
Zambia	-0.004	-0.020	-0.024	-0.004	-0.008	-0.012
Serbia	-0.004	-0.019	-0.023	-0.004	-0.007	-0.010
Sri Lanka	-0.003	-0.017	-0.020	-0.003	-0.004	-0.007
Belarus	-0.003	-0.015	-0.019	-0.003	-0.002	-0.005
Ghana	-0.003	-0.015	-0.018	-0.003	-0.001	-0.004
Kazakhstan	-0.003	0.011	0.008	-0.003	0.024	0.020
Croatia	-0.003	-0.015	-0.018	-0.003	-0.001	-0.004
Slovak Republic	-0.003	0.015	0.012	-0.003	0.027	0.024
Zimbabwe	-0.003	-0.014	-0.017	-0.003	0.000	-0.003
Trinidad and Tobago	-0.003	-0.013	-0.016	-0.003	0.001	-0.002
Vietnam	-0.003	0.042	0.039	-0.003	0.053	0.050

Table 3a. Second Round Simulation – Increases and Decreases in Quota and Voting Shares – By Member 1/ 2/ (continued)
(In percentage points)

	Quota Share			Voting Share		
Country	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round
Cote d'Ivoire	-0.003	-0.013	-0.016	-0.003	0.001	-0.002
Sudan	-0.003	-0.013	-0.015	-0.003	0.002	-0.001
Uruguay	-0.003	-0.012	-0.015	-0.003	0.002	-0.001
Ecuador	-0.002	0.007	0.005	-0.003	0.020	0.018
Syrian Arab Republic	-0.002	0.011	0.008	-0.003	0.024	0.021
Tunisia	-0.002	-0.011	-0.014	-0.002	0.003	0.001
Angola	-0.002	-0.011	-0.014	-0.002	0.003	0.001
Luxembourg	-0.002	0.047	0.045	-0.002	0.059	0.056
Uzbekistan	-0.002	-0.011	-0.013	-0.002	0.004	0.001
Jamaica	-0.002	-0.011	-0.013	-0.002	0.004	0.001
Kenya	-0.002	-0.011	-0.013	-0.002	0.004	0.002
Qatar	-0.002	0.006	0.004	-0.002	0.020	0.017
Myanmar	-0.002	-0.010	-0.012	-0.002	0.005	0.002
Yemen, Republic of	-0.002	-0.010	-0.012	-0.002	0.005	0.003
Slovenia	-0.002	0.009	0.007	-0.002	0.023	0.021
Dominican Republic	-0.002	-0.009	-0.011	-0.002	0.007	0.005
Brunei Darussalam	-0.002	-0.009	-0.010	-0.002	0.007	0.005
Guatemala	-0.002	-0.008	-0.010	-0.002	0.007	0.005
Panama	-0.002	-0.008	-0.010	-0.002	0.007	0.006
Lebanon	-0.002	0.018	0.017	-0.002	0.033	0.031
Tanzania	-0.002	-0.008	-0.010	-0.002	0.008	0.006
Oman	-0.002	0.010	0.009	-0.002	0.025	0.023
Cameroon	-0.002	-0.007	-0.009	-0.002	0.009	0.007
Uganda	-0.001	-0.007	-0.009	-0.002	0.009	0.007
Bolivia	-0.001	-0.007	-0.008	-0.002	0.009	0.008
El Salvador	-0.001	-0.007	-0.008	-0.002	0.009	0.008
Jordan	-0.001	-0.007	-0.008	-0.002	0.009	0.008
Bosnia-Herzegovina	-0.001	-0.007	-0.008	-0.002	0.009	0.008
Costa Rica	-0.001	0.003	0.002	-0.001	0.019	0.017
Islamic Republic of Afghanistan	-0.001	-0.006	-0.008	-0.001	0.010	0.008
Senegal	-0.001	-0.006	-0.008	-0.001	0.010	0.008
Azerbaijan	-0.001	-0.006	-0.008	-0.001	0.010	0.008
Gabon	-0.001	-0.006	-0.007	-0.001	0.010	0.009
Georgia	-0.001	-0.006	-0.007	-0.001	0.010	0.009
Lithuania	-0.001	0.011	0.010	-0.001	0.026	0.025

Table 3a. Second Round Simulation – Increases and Decreases in Quota and Voting Shares – By Member 1/ 2/ (continued)
(In percentage points)

Country	Quota Share			Voting Share		
	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round
Cyprus	-0.001	0.002	0.001	-0.001	0.018	0.017
Namibia	-0.001	-0.005	-0.007	-0.001	0.011	0.010
Bahrain	-0.001	0.012	0.011	-0.001	0.028	0.026
Ethiopia	-0.001	-0.005	-0.006	-0.001	0.011	0.010
Papua New Guinea	-0.001	-0.005	-0.006	-0.001	0.011	0.010
Bahamas, The	-0.001	-0.005	-0.006	-0.001	0.012	0.010
Nicaragua	-0.001	-0.005	-0.006	-0.001	0.012	0.010
Honduras	-0.001	-0.005	-0.006	-0.001	0.012	0.010
Liberia	-0.001	-0.005	-0.006	-0.001	0.012	0.010
Latvia	-0.001	0.001	0.000	-0.001	0.018	0.017
Moldova	-0.001	-0.005	-0.006	-0.001	0.012	0.011
Madagascar	-0.001	-0.005	-0.006	-0.001	0.012	0.011
Iceland	-0.001	-0.005	-0.006	-0.001	0.012	0.011
Mozambique	-0.001	-0.005	-0.005	-0.001	0.012	0.011
Guinea	-0.001	-0.004	-0.005	-0.001	0.013	0.012
Sierra Leone	-0.001	-0.004	-0.005	-0.001	0.013	0.012
Malta	-0.001	-0.004	-0.005	-0.001	0.013	0.012
Mauritius	-0.001	-0.004	-0.005	-0.001	0.013	0.012
Paraguay	-0.001	-0.004	-0.005	-0.001	0.013	0.012
Mali	-0.001	-0.004	-0.005	-0.001	0.013	0.013
Suriname	-0.001	-0.004	-0.004	-0.001	0.014	0.013
Armenia	-0.001	-0.004	-0.004	-0.001	0.014	0.013
Guyana	-0.001	-0.004	-0.004	-0.001	0.014	0.013
Kyrgyz Republic	-0.001	-0.004	-0.004	-0.001	0.014	0.013
Cambodia	-0.001	-0.004	-0.004	-0.001	0.014	0.013
Tajikistan	-0.001	-0.003	-0.004	-0.001	0.014	0.013
Congo, Republic of	-0.001	-0.003	-0.004	-0.001	0.014	0.013
Haiti	-0.001	-0.003	-0.004	-0.001	0.014	0.013
Somalia	-0.001	-0.003	-0.004	-0.001	0.014	0.013
Rwanda	-0.001	-0.003	-0.004	-0.001	0.014	0.013
Burundi	-0.001	-0.003	-0.004	-0.001	0.014	0.014
Turkmenistan	-0.001	0.007	0.006	-0.001	0.024	0.023
Togo	-0.001	-0.003	-0.004	-0.001	0.015	0.014
Nepal	-0.001	-0.003	-0.003	-0.001	0.015	0.014
Fiji	-0.001	-0.003	-0.003	-0.001	0.015	0.014

Table 3a. Second Round Simulation – Increases and Decreases in Quota and Voting Shares – By Member 1/ 2/ (continued)
(In percentage points)

	Quota Share			Voting Share		
Country	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round
Malawi	-0.001	-0.003	-0.003	-0.001	0.015	0.014
Macedonia, FYR	-0.001	-0.003	-0.003	-0.001	0.015	0.014
Barbados	-0.001	-0.003	-0.003	-0.001	0.015	0.014
Niger	-0.001	-0.003	-0.003	-0.001	0.015	0.014
Estonia	-0.001	0.009	0.009	-0.001	0.026	0.026
Mauritania	-0.001	-0.003	-0.003	-0.001	0.015	0.014
Botswana	-0.001	0.008	0.007	-0.001	0.025	0.024
Benin	-0.001	-0.002	-0.003	-0.001	0.015	0.014
Burkina Faso	0.000	-0.002	-0.003	-0.001	0.015	0.015
Chad	0.000	0.002	0.002	-0.001	0.020	0.019
Central African Republic	0.000	-0.002	-0.003	-0.001	0.016	0.015
Lao, People's Dem. Republic	0.000	-0.002	-0.003	-0.001	0.016	0.015
Mongolia	0.000	-0.002	-0.002	-0.001	0.016	0.015
Swaziland	0.000	-0.002	-0.002	-0.001	0.016	0.015
Albania	0.000	0.003	0.002	-0.001	0.020	0.020
Lesotho	0.000	-0.001	-0.002	0.000	0.017	0.016
Equatorial Guinea	0.000	0.007	0.007	0.000	0.025	0.024
Gambia, The	0.000	-0.001	-0.002	0.000	0.017	0.016
Montenegro	0.000	-0.001	-0.001	0.000	0.017	0.017
Belize	0.000	-0.001	-0.001	0.000	0.017	0.017
San Marino	0.000	0.002	0.001	0.000	0.020	0.019
Vanuatu	0.000	-0.001	-0.001	0.000	0.018	0.017
Djibouti	0.000	-0.001	-0.001	0.000	0.018	0.017
Eritrea	0.000	0.000	0.000	0.000	0.019	0.018
St. Lucia	0.000	-0.001	-0.001	0.000	0.018	0.017
Guinea-Bissau	0.000	-0.001	-0.001	0.000	0.018	0.017
Antigua and Barbuda	0.000	-0.001	-0.001	0.000	0.018	0.017
Grenada	0.000	0.000	-0.001	0.000	0.018	0.018
Samoa	0.000	0.000	-0.001	0.000	0.018	0.018
Solomon Islands	0.000	0.000	-0.001	0.000	0.018	0.018
Cape Verde	0.000	0.000	0.000	0.000	0.019	0.018
Comoros	0.000	0.000	0.000	0.000	0.018	0.018
St. Kitts and Nevis	0.000	0.000	0.000	0.000	0.018	0.018
Seychelles	0.000	0.001	0.000	0.000	0.019	0.019
St. Vincent and the Grenadines	0.000	0.000	0.000	0.000	0.018	0.018

Table 3a. Second Round Simulation – Increases and Decreases in Quota and Voting Shares – By Member 1/ 2/ (concluded)
(In percentage points)

	Quota Share			Voting Share		
Country	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round	From pre-Singapore to post-Singapore	From post-Singapore to post second round	From pre-Singapore to post second round
Dominica	0.000	0.000	0.000	0.000	0.018	0.018
Maldives	0.000	0.000	0.000	0.000	0.019	0.018
Timor-Leste	0.000	0.001	0.001	0.000	0.019	0.019
Sao Tome and Principe	0.000	0.000	0.000	0.000	0.018	0.018
Tonga	0.000	0.000	0.000	0.000	0.018	0.018
Bhutan	0.000	0.001	0.001	0.000	0.019	0.019
Kiribati	0.000	0.000	0.000	0.000	0.018	0.018
Micronesia, Fed. States of	0.000	0.000	0.000	0.000	0.018	0.018
Marshall Islands	0.000	0.000	0.000	0.000	0.018	0.018
Palau, Republic of	0.000	0.000	0.000	0.000	0.018	0.018

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^0.95. GDP blended using 60 percent market and 40 percent PPP exchange rates. Simulation assumes an overall increase of 11.5 percent (first and second rounds combined); U.S. foregoing to its post-Singapore voting share and application of the U.S. reduction factor to other eligible G-7 members; 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; a minimum 15 percent increase in post-Singapore nominal quota for these four countries; a maximum 50 percent quota increase for advanced economies; a tripling of basic votes; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
3/ Includes China, P.R., and Hong Kong SAR.

Table 3b. Second Round Simulation – Members Receiving an Increase in Quota Shares from Pre-Singapore Levels 1/ 2/
(Includes first and second round ad hoc quota increases)

Country	Quota: Percentage Pt. Increase (Share)	Quota: Percentage Increase (Nominal)	Country	Quota: Percentage Pt. Increase (Share)	Quota: Percentage Increase (Nominal)
China 3/	1.017	49.6	Slovenia	0.007	18.7
Korea	0.648	106.1	Equatorial Guinea	0.007	60.4
India	0.497	40.0	Italy	0.006	11.7
Brazil	0.363	40.0	Turkmenistan	0.006	31.1
Japan	0.329	17.4	Ecuador	0.005	15.1
Mexico	0.312	40.2	Qatar	0.004	14.7
United States	0.294	13.4	Albania	0.002	23.2
Spain	0.262	32.0	Costa Rica	0.002	14.0
Singapore	0.187	63.3	Chad	0.002	18.9
Turkey	0.160	51.0	San Marino	0.001	31.6
Ireland	0.135	50.0	Cyprus	0.001	13.3
Thailand	0.098	33.1	Timor-Leste	0.001	31.7
Greece	0.077	33.9	Bhutan	0.001	34.5
Poland	0.068	23.3	Seychelles	0.000	23.3
Malaysia	0.049	19.3	Maldives	0.000	21.5
Luxembourg	0.045	50.0	Latvia	0.000	12.0
Vietnam	0.039	40.0	Eritrea	0.000	15.1
Czech Republic	0.037	22.3	Cape Verde	0.000	17.0
United Arab Emirates	0.030	23.0	Palau, Republic of	0.000	13.0
Portugal	0.026	18.7			
Germany	0.026	12.0			
Denmark	0.025	15.1			
Lebanon	0.017	31.2			
Philippines	0.016	15.8			
Slovak Republic	0.012	19.6			
Austria	0.011	12.9			
Israel	0.011	14.3			
Bahrain	0.011	30.7			
Lithuania	0.010	27.5			
Estonia	0.009	44.0			
Oman	0.009	22.2			
Kazakhstan	0.008	17.0			
Norway	0.008	12.7			
Syrian Arab Republic	0.008	18.1			
Botswana	0.007	39.3			

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^0.95. GDP blended using 60 percent market and 40 percent PPP exchange rates. Simulation assumes an overall increase of 11.5 percent (first and second rounds combined); U.S. foregoing to its post-Singapore voting share and application of the U.S. reduction factor to other eligible G-7 members; 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; minimum 15 percent increase in post-Singapore nominal quota for these four countries; a maximum 50 percent quota increase for advanced economies; a tripling of basic votes; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
3/ Includes China, P.R., and Hong Kong SAR.

Table 3c. Second Round Simulation – Members Receiving an Increase in Voting Shares from Pre-Singapore Levels 1/ 2/
(Includes first and second round ad hoc quota increases)

Country 3/	Voting: Percentage Pt. Increase (Share)	Voting: Percentage Increase (Nominal)	Country 3/	Voting: Percentage Pt. Increase (Share)	Voting: Percentage Increase (Nominal)
China 4/ *	0.879	50.1	Antigua and Barbuda	0.017	129.9
Korea *	0.605	107.5	Qatar *	0.017	30.7
India *	0.422	41.0	Guinea-Bissau	0.017	127.6
Brazil *	0.313	41.3	St. Lucia	0.017	124.1
Mexico *	0.272	41.7	Costa Rica *	0.017	38.6
Spain *	0.217	33.3	Djibouti	0.017	122.2
Singapore *	0.182	67.1	Vanuatu	0.017	119.0
Turkey *	0.154	54.8	Belize	0.017	114.2
Ireland *	0.133	54.3	Cyprus *	0.017	41.7
Japan *	0.119	17.7	Montenegro	0.017	95.2
Thailand *	0.094	36.9	Latvia *	0.017	43.0
Greece *	0.078	38.8	Gambia, The	0.016	89.1
Poland *	0.061	26.5	Lesotho	0.016	83.5
Luxembourg *	0.056	62.3	Denmark *	0.016	17.9
Vietnam *	0.050	51.3	Swaziland	0.015	66.1
Malaysia *	0.041	22.3	Mongolia	0.015	65.7
Czech Republic *	0.040	27.6	Lao, People's Dem. Republic	0.015	64.2
United Arab Emirates *	0.037	30.0	Central African Republic	0.015	62.0
Lebanon *	0.031	49.7	Burkina Faso	0.015	58.7
Portugal *	0.029	23.8	Benin	0.014	57.5
Bahrain *	0.026	57.1	Mauritania	0.014	55.9
Estonia *	0.026	87.2	Niger	0.014	55.1
Lithuania *	0.025	53.0	Barbados	0.014	54.1
Botswana *	0.024	85.0	Macedonia, FYR	0.014	53.2
Equatorial Guinea *	0.024	121.0	Malawi	0.014	53.0
Slovak Republic *	0.024	31.4	Israel *	0.014	19.2
Oman *	0.023	42.5	Fiji	0.014	52.5
Turkmenistan *	0.023	73.2	Nepal	0.014	51.9
Syrian Arab Republic *	0.021	32.4	Togo	0.014	50.8
Slovenia *	0.021	36.3	Burundi	0.014	49.0
Kazakhstan *	0.020	28.7	Rwanda	0.013	47.6
Albania *	0.020	83.2	Somalia	0.013	46.9
Philippines *	0.020	20.9	Haiti	0.013	46.8
San Marino *	0.019	131.8	Congo, Republic of	0.013	45.6
Chad *	0.019	74.8	Tajikistan	0.013	44.6
Timor-Leste *	0.019	158.4	Cambodia	0.013	44.4
Bhutan *	0.019	166.7	Kyrgyz Republic	0.013	43.9
Seychelles *	0.019	154.0	Guyana	0.013	43.1
Maldives *	0.018	155.9	Armenia	0.013	42.7
Cape Verde *	0.018	149.2	Suriname	0.013	42.7
Eritrea *	0.018	128.1	Mali	0.013	42.3
Palau, Republic of *	0.018	179.4	Paraguay	0.012	40.0
Marshall Islands	0.018	175.4	Mauritius	0.012	39.5
Micronesia, Fed. States of	0.018	166.1	Malta	0.012	39.4
Kiribati	0.018	163.4	Sierra Leone	0.012	38.9
Tonga	0.018	156.7	Guinea	0.012	37.9
Sao Tome and Principe	0.018	154.3	Mozambique	0.011	36.1
Dominica	0.018	150.6	Iceland	0.011	35.1
St. Vincent and the Grenadines	0.018	150.2	Madagascar	0.011	34.0
Ecuador *	0.018	29.2	Moldova	0.011	33.7
Comoros	0.018	147.5	Liberia	0.010	32.4
St. Kitts and Nevis	0.018	147.5	Honduras	0.010	32.4
Solomon Islands	0.018	141.2	Nicaragua	0.010	32.3
Samoa	0.018	136.6	Bahamas, The	0.010	32.2
Grenada	0.018	136.2	Papua New Guinea	0.010	31.9

Table 3c. Second Round Simulation – Members Receiving an Increase in Voting Shares from Pre-Singapore Levels 1/ 2/ (concluded)
(Includes first and second round ad hoc quota increases)

Country 3/	Voting: Percentage Pt. Increase (Share)	Voting: Percentage Increase (Nominal)	Country 3/	Voting: Percentage Pt. Increase (Share)	Voting: Percentage Increase (Nominal)
Ethiopia	0.010	31.5	Kenya	0.002	16.9
Namibia	0.010	31.0	Jamaica	0.001	16.8
Georgia	0.009	28.5	Uzbekistan	0.001	16.6
Gabon	0.009	27.9	Angola	0.001	16.1
Azerbaijan	0.008	26.9	Tunisia	0.001	16.1
Senegal	0.008	26.8			
Afghanistan, Islamic State of	0.008	26.8			
Bosnia-Herzegovina	0.008	25.8			
Jordan	0.008	25.6			
El Salvador	0.008	25.5			
Bolivia	0.008	25.4			
Uganda	0.007	24.3			
Cameroon	0.007	23.7			
Tanzania	0.006	22.3			
Panama	0.006	21.6			
Guatemala	0.005	21.3			
Brunei Darussalam	0.005	20.8			
Dominican Republic	0.005	20.5			
Yemen, Republic of	0.003	18.6			
Myanmar	0.002	17.6			

Source: Finance Department.

1/ For the three countries that have not yet consented to, and paid for, their quota increases, 11th Review proposed quotas are used. Countries for which voting rights are suspended are included in total Fund votes. Includes Montenegro, which became a member on January 18, 2007 (pre-Singapore shares have been adjusted accordingly).
2/ Based on the following formula: CQS = (0.50*GDP + 0.30*Openness +0.15*Variability + 0.05*Reserves)^0.95. GDP blended using 60 percent market and 40 percent PPP exchange rates. Simulation assumes an overall increase of 11.5 percent (first and second rounds combined); U.S. foregoing to its post-Singapore voting share and application of the U.S. reduction factor to other eligible G-7 members; 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; minimum 15 percent increase in post-Singapore nominal quota for these four countries; a maximum 50 percent quota increase for advanced economies; a tripling of basic votes; and underrepresented EMDCs are eligible for minimum nominal quota increase (boost) of 40 percent for first and second rounds combined if their share of global PPP GDP is at least 75 percent greater than pre-Singapore quota share.
3/ An asterisk indicates that the member has benefited from an ad hoc increase.
4/ Includes China, P.R., and Hong Kong SAR.

March 18, 2008

The Chairman's Summing Up
Quota and Voice Reform—Key Elements of a Potential Package of Reforms
Executive Board Meeting 08/22
March 11, 2008

Directors welcomed the opportunity to consider the proposed package of quota and voice reforms designed to meet the objectives endorsed in Singapore. These objectives are: to achieve a significant further alignment of members' quotas with their relative positions in the world economy, based on a simpler and more transparent quota formula; and, as an integral part of the reform program, to enhance the voice and participation of low-income countries. Directors recognized that the proposal seeks to balance the differing views and priorities of members, and that agreement will require willingness to make difficult compromises. While most Directors expressed reservations about some aspects of the proposal, a broad majority indicated that they could support the central elements of the proposed package. There were some differences of view, however, as to what constituted the central elements. A few Directors said that they could accept the proposal only in its entirety. Some Directors could not accept the proposal without fundamental changes, in particular to achieve a sufficient increase in the quota share of emerging market and developing countries from the pre-Singapore level. However, I am pleased to note that even those Directors who could not accept the proposal as it stands remain prepared to give further consideration to a final proposal from the Managing Director.

New Quota Formula

Most Directors agreed that the proposed new quota formula would represent a significant improvement over the existing five formulas in terms of simplicity and transparency. Accordingly, they were willing to support the new formula, which contains the following elements: a linear combination of four variables expressed in shares—GDP, openness, variability, and reserves—with weights of 50 percent, 30 percent, 15 percent, and 5 percent, respectively; use of a blended GDP variable with weights of 60 percent on market-rate GDP and 40 percent on PPP GDP; and use of a compression factor of 0.95. At the same time, most Directors stressed the need for improvements in the definitions of openness and variability. In this connection, a number of issues have been identified, including the scope for measuring openness on a value-added rather than a gross basis, the treatment of intra-currency union flows, the appropriate way of capturing financial openness, and how to modify the measure of variability to better capture members' potential need for Fund resources. The issue of database adjustments should also be revisited. Some Directors questioned the inclusion of PPP GDP in the formula, while some others would have preferred a larger weight for PPP GDP.

Directors discussed the possibility of sunset clauses on PPP GDP and on compression in the formula. Many Directors saw benefit in a sunset on PPP GDP to reflect the expectation of significant convergence between market and PPP GDP for dynamic economies within the next two decades, and considered that a sunset should be retained. Many other Directors considered such a sunset on PPP GDP unnecessary, and even unwarranted where such convergence is not expected for other countries for some time. A variety of views were also expressed regarding a sunset on compression, with most Directors voicing reservations. Some Directors considered it crucial that such a sunset be retained in the package. Given the strength of the views expressed, we will need to consider carefully the role of the sunset clauses in the final package.

Second Round Ad Hoc Quota Increases

Directors reiterated that the current reform should enhance representation for dynamic economies, many of which are emerging market economies, whose weight and role in the global economy have increased. They also took note of the statement by the IMFC in its October 2007 Communiqué that an outcome of the second round should be a further increase in the voting share of emerging market and developing countries as a whole.

Most Directors could support the key parameters for the second round allocations under the proposal as part of the overall package. In particular, these Directors agreed that the overall increase in the two rounds combined should be 11.5 percent (9.6 percent in the second round), recognizing that there are Directors who would prefer a larger increase and others who would prefer a smaller increase. Most Directors also agreed that the second round ad hoc increases should be allocated to all underrepresented members under the new quota formula primarily based on a uniform proportional reduction in members' out-of-lineness, following the methodology used in the first round and with the use of pre-Singapore quota shares consistent with treating the two rounds as a single reform.

Most Directors could also generally support the additional elements proposed for the second round—as discussed in paragraph 10 of the staff paper—noting the staff's clarification that such mechanisms were intended to be of a one-off nature. Some Directors, however, felt that the "booster" did not treat all dynamic economies fairly. A few Directors also expressed disappointment that the proposal for the second round would still leave underrepresented the four countries that benefited from the first round of ad hoc quota increases. A few Directors regarded the cap on quota increases of advanced countries as discriminatory—an issue with which we will need to deal.

Future Realignments of Quota Shares

The Board reaffirmed the importance of ensuring that quota and voting shares continue to adapt in the future to changes in the global economy. Directors recognized that this question is particularly important for members whose quota shares may decline in this round, or that receive only limited increases but are expected to experience dynamic growth in coming years. Directors generally supported the inclusion in the Board of Governors Resolution of a request that the Executive Board consider the need for further realignments of quota shares in line with changes over time in members' relative economic positions in the global economy. It was noted that the regular five-yearly reviews of quotas provide a vehicle for realigning quota shares. In this context, several Directors recalled that the Fund's liquidity needs should remain the guiding principle for any future general quota increases, while a number of Directors emphasized that the realignments should be considered irrespective of liquidity needs. I will come back to the Board with a more specific proposal on this important issue.

Other Elements

Directors reiterated that an increase in basic votes is an integral part of the quota and voice reform, and a key measure for enhancing the voice and participation of low-income countries. In this context, Directors agreed that basic votes should be tripled, in order to provide for a significant increase in the voting share for low-income country members as a group. They welcomed the proposed amendment of the Articles of Agreement aimed at establishing a mechanism to maintain constant the share of basic votes to total voting power going forward, as specified in the Singapore Resolution and discussed previously by the Board. A number of Directors called for increased access limits, with a view to further enhancing the relevance of the Fund for many developing countries.

Directors also discussed the need for an amendment of the Articles to enable Executive Directors elected by a large number of members to appoint an additional Alternate Executive Director, along the lines of the proposal that was previously discussed by the Executive Board. Directors supported this proposal as a means to further enhance the capacity of African offices to represent the countries in their constituencies at a higher level, recognizing their special challenges, including the heavy workload that flows from the important advisory and financial role that the Fund is playing in many of the member countries of these constituencies. At the same time, Directors emphasized that in the current environment it will be important to ensure that the incremental costs of the proposal are accommodated within an appropriately restrained budget framework, with some Directors of the view that the costs should be absorbed within the offices of the benefiting constituencies.

In conclusion, let me say that we have had a very productive discussion. In a spirit of compromise, most Directors have expressed support for the central elements of the proposed package of reforms. I have also taken note of the views of those Directors who still have reservations and I shall consider how best to address their concerns while preserving the elements of the package that have found broad support today. I shall send you a proposal for your final consideration in the near future and look forward to bringing this process to a successful conclusion at our next discussion.