



IMF POLICY PAPER

FIFTEENTH GENERAL REVIEW OF QUOTAS—FURTHER CONSIDERATIONS

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- The **Main Paper**, prepared by IMF staff and completed on January 5, 2018 for the Committee of the Whole's consideration on February 2, 2018.
- The **Annexes** (Supplement 1), prepared by IMF staff and completed on January 5, 2018.
- The **Statistical Appendix** (Supplement 2), prepared by IMF staff and completed on January 10, 2018.
- The **Chairman's Concluding Remarks**, which reflect the Chairman's understanding of the views expressed during the February 2, 2018 meeting of the Committee of the Whole.

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FIFTEENTH GENERAL REVIEW OF QUOTAS—FURTHER CONSIDERATIONS

EXECUTIVE SUMMARY

Following two meetings of the Committee of the Whole in September 2017, this paper provides background for further discussions on the Fifteenth General Review of Quotas (the 15th Review). No proposals are made at this stage, pending further Board guidance on possible approaches to narrowing the current differences of views.

The paper revisits the two-pillar framework for assessing the adequacy of Fund resources. Responding to Directors suggestions, the quantitative pillar is updated to include alternative assumptions and to provide a longer-term perspective on likely resource needs. While quantitative estimates are generally somewhat lower after factoring in the alternative assumptions, these reductions are more than outweighed when the analysis is extended through the middle of the next decade, recognizing that the outcome of the 15th Review will likely determine permanent Fund resources through at least the middle of the next decade. The updated qualitative pillar analysis highlights reforms since the global financial crisis and discusses uncertainties in the global environment. It also provides an assessment of the general impact of the various qualitative considerations. Taken together, the two pillars continue to make a case for at least maintaining existing Fund resources. Against this background, the simulations in the paper cover three illustrative sizes for quota increases (50, 75, and 100 percent), centered on broadly maintaining Fund resources, assuming the New Arrangements to Borrow (NAB) is maintained at its current level and Bilateral Borrowing Agreements (BBAs) expire.

Concerning the composition of Fund resources, the paper supports the view that the Fund's traditional model of relying primarily on its permanent quota resources, supplemented by standing borrowing arrangements, has served the membership well.

The paper takes stock of recent discussions on the quota formula and responds to Directors' requests for further technical work on variability and PPP GDP. It also provides an overview of approaches to quota adjustments that have facilitated the required broad consensus for changes in quotas in previous general reviews. A limited set of simulations illustrates the potential impact that different quota increases, quota formulas, and allocation mechanisms would have on the distribution of actual quota shares, with the aim of facilitating ongoing discussions on the formula and the possible parameters of any quota increase.

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INTRODUCTION

1. This paper provides background for further discussions on the 15th General Review of Quotas (hereafter the 15th Review). In line with its agreed work plan,¹ Executive Directors met as the Committee of the Whole (CoW) on two occasions in September 2017 for an informal exchange of views on key issues for the 15th Review. The discussions covered issues related to the quota formula and realigning quota shares on September 1st² and the adequacy of Fund resources on September 15th.³ In these discussions, Directors recognized that these issues are closely interlinked and will ultimately need to be agreed as a package. They also provided useful feedback and clarifications of views.⁴ Against this backdrop, this paper presents further work on the adequacy and composition of Fund resources, on selected issues related to the quota formula, and on issues related to the distribution of quotas. No proposals are made at this stage, pending further Board guidance on possible approaches to narrowing the current differences of views.

2. The paper is organized as follows. The next section revisits selected issues on the adequacy and composition of Fund resources. It is followed by a brief stock take of discussions on the quota formula and the results of further work in response to Directors' requests. The next section reviews alternative approaches to distributing quota increases, and presents some illustrative simulations. The paper concludes with a summary and issues for discussion. Additional technical material is presented in a set of Annexes issued as Supplement 1.

ADEQUACY OF FUND RESOURCES

During the September 15th discussion, Directors expressed a range of views on the appropriate size of quotas and the Fund's overall lending capacity. Many Directors supported, or were open to, a quota increase that would at least maintain the Fund's current lending capacity, with many of these calling for an increase in the lending capacity. Many others had not yet formed a view, with a few noting that the Fund's current quota and NAB resources appeared sufficient to handle a range of scenarios. Building on staff's earlier work and Directors' feedback, this section presents additional analyses on the adequacy and composition of Fund resources.

¹ As set out in the Board of Governors Resolution No. 72-1, adopted on December 5, 2016, this work should be completed by the 2019 Spring Meetings and no later than the 2019 Annual Meetings. The work plan was set out in Attachment I of [Fifteenth General Review of Quotas—Report of the Executive Board to the Board of Governors](#) (11/2/16).

² As background for this discussion, staff had prepared [Fifteenth General Review of Quotas—Quota Formula and Realigning Shares](#) (8/2/17).

³ As background for this discussion, staff had prepared [Adequacy of Fund Resources—Further Considerations](#) (7/31/17).

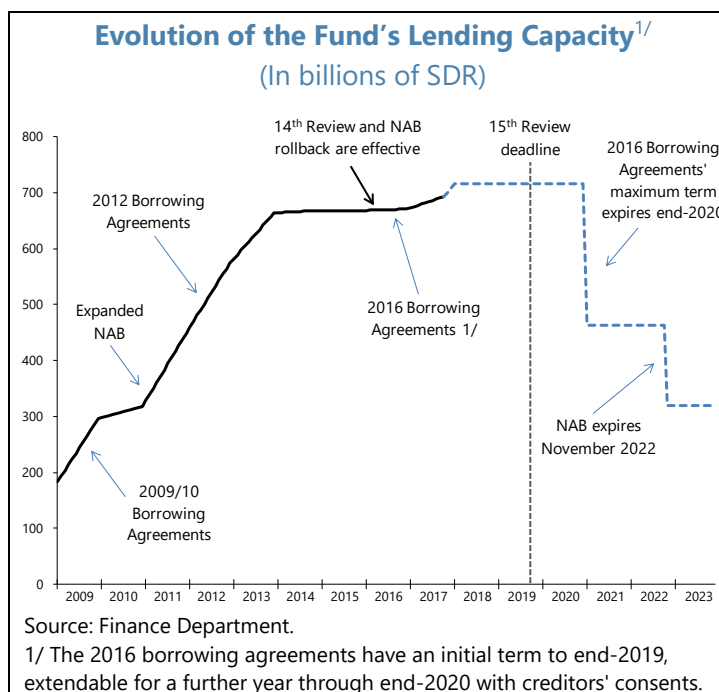
⁴ See [The Chairman's Concluding Remarks—Fifteenth General Review of Quotas—Quota Formula and Realigning Shares](#) (9/7/17) and [The Chairman's Concluding Remarks—Fifteenth General Review of Quotas—Adequacy of Fund Resources Further Considerations](#) (9/22/17). These two meetings of the CoW helped inform the [Progress on the Fifteenth General Review of Quotas—Report of the Executive Board to the Board of Governors](#) (10/4/17).

A. Context

3. There is a shared commitment to a strong, quota-based and adequately-resourced IMF at the center of the global financial safety net (GFSN).⁵ In a world of increasingly globalized risks, the Fund's expertise and its catalytic and central financing roles remain critical. And, with its near-universal membership and a wide array of lending instruments, the Fund has retained its central role by providing for efficient risk sharing and reserve pooling at the global level, which helps promote global economic and financial stability.

4. Absent further action, the Fund's lending capacity would fall sharply by end-2019 or end-2020 at the latest.⁶ While bilateral

borrowing has played a key role since the global financial crisis (GFC) as a backstop to quotas and NAB, many Directors had stressed that it would be important not to pre-suppose future discussions on the possible renewal of the bilateral borrowing agreements (BBAs). If the 2016 BBAs expire, the Fund's total lending capacity would decline by a third to SDR 463 billion. Without a renewal of the NAB resources, the lending capacity would decline further to SDR 320 billion by end-2022.



5. A general quota increase as part of the 15th Review would serve several purposes:

- **Ensure adequate permanent resources are available before the next systemic crisis.** A key lesson of the GFC was that, to better respond to a crisis, the Fund should secure sufficient resources in advance, relying primarily on quotas.⁷ The updated two-pillar framework, discussed below, sheds further light on the Fund's resource needs under crisis scenarios.

⁵ [Communiqué of the Thirty-Sixth Meeting of the International Monetary and Financial Committee \(IMFC\)](#), October 14, 2017.

⁶ For an overview of different concepts of Fund resources, see Box 1 in [Adequacy of Fund Resources—Further Considerations](#) (7/31/17).

⁷ See *IMF Response to the Financial and Economic Crisis*, Independent Evaluation Office (IEO), October 27, 2014. In earlier discussions, many Directors stressed the importance of having resources available ex ante, while a few noted that the Fund had been able to raise funds in the past, as the need arose.

- **Rebalance the mix of Fund resources more in line with past practice.** As a quota-based institution, the Fund has historically financed most of its non-concessional lending with quota resources.⁸ This reflects the role of quotas in governance and in transactions with members and the advantages of quotas relative to borrowing, such as the broad burden sharing of quota resources, and accessibility to resources based on decisions by the Executive Board.⁹
- **Continue the process of realigning members' quota shares** in line with their evolving relative positions in the world economy. This would build on the 2008 and 2010 reforms, thus further strengthening the Fund's governance and legitimacy.

B. The Two-Pillar Framework for Assessing the Adequacy of Fund Resources: An Update

6. This section revisits and expands on the quantitative and qualitative pillars of the [2017 paper on resource adequacy](#).¹⁰ Directors welcomed the two-pillar framework for assessing the adequacy of Fund resources and underscored the important role for judgment. They suggested two areas to help advance the discussions: (1) updating the quantitative pillar to include alternative assumptions and providing a longer-term perspective as the outcome of the 15th Review will likely determine the Fund's permanent resources through at least the middle of the next decade; and (2) revisiting the qualitative pillar to give more prominence to factors that could reduce the demand on Fund resources.

Quantitative Pillar

7. Staff explored several considerations following feedback from Directors (Table 1 and Annexes I-III). In particular:

- **Traditional metrics.**¹¹ Staff explores an alternative weighting of metrics that assigns greater weight to more recent reviews.¹² This refinement narrows the range of outcomes for the reference period 2015-19, which is used considering the deadline for completing the 15th Review in 2019. It modestly increases the quota resources needed to restore the ratio to GDP, as the

⁸ Quotas have accounted for about 84 percent of the Fund's overall resources over the 30 years prior to the GFC. While the share of quotas fell sharply following the increase in borrowed resources after the GFC, the quota increases under the 14th Review raised this share to about 50 percent of total resources, albeit still well short of the historical average.

⁹ For more details see Section on Considerations on the Composition of Fund Resources in [Adequacy of Fund Resources—Further Considerations](#) (7/31/17).

¹⁰ [Adequacy of Fund Resources—Further Considerations](#) (7/31/17).

¹¹ The use of an outdated WEO BPM6 database generated errors in some of the traditional metrics analysis presented in the Adequacy of Fund Resources papers issued in March 2016 and August 2017. The corrected data do not affect the GDP-based metrics but lower the remaining measures, without altering the earlier papers' overall conclusions.

¹² A weighted average of the ratios at the time of the last four quota reviews with quota increases is used. Weights are increasing over time, determined as the inverse of the number of years since the quota review took place (normalized). Annex I presents the updated results using the traditional methodology based on simple averages.

reference ratio to GDP increased slightly as the higher ratio at the time of the 14th General Review is assigned more weight under this refinement. At the same time, it reduces the quota increases needed to restore quota ratios relative to external variables, as reference ratios to external variables have been declining over time.¹³

- **Access-based approach.** Rather than the top 12 borrowers assumed in the 2017 paper, the refinement assumes that the top six borrowers approach the Fund at the same time—in line with the average number of top borrowers in past crises. Assumed program sizes remained unchanged between 4 to 8 percent of GDP as in the 2017 paper. This refinement lowers the demand for Fund resources to SDR 279-559 billion.
- **Global scenarios.** Reserve drawdowns of up to 40 percent of reserves are now allowed as long as they remain above 80 percent of the Assessing Reserve Adequacy (ARA) metric for emerging market economies, compared with 25 and 100 percent, respectively, in the 2017 paper.¹⁴ In addition, the model now includes active RMB swap lines as an additional source of non-Fund financing.¹⁵ The additional non-Fund financing modestly lowers the demand for Fund financing during 2017-18 to SDR 133-1,065 billion.

Table 1. Impact of Refinements on Potential Demand for Fund Resources^{1/}
(In SDR billions)

Approach	2017 Paper	Refinement
Metric-based ^{2/} (To restore quota ratios)	222-636 (revised data) ^{3/}	251-596
Access-based ^{4/} Top borrowers	371-743	279-559
Global scenarios ^{5/}	143-1,391	133-1,065

1/ The metric-based results are assessed with respect to quotas (as in previous quota reviews). The access-based and global shock scenarios are assessed with respect to total lending capacity, excluding BBAs.

2/ Additional quotas needed to restore quotas relative to economic indicators (GDP, current payments, capital inflows to EMDCs, and external financing needs). See Annex I for details.

3/ The numbers for August 2017 were revised with data from the April 2017 WEO to correct data errors for external variables generated by the use of an outdated WEO BPM6 database.

4/ Assumes program sizes of 4 to 8 percent of GDP as in the 2017 paper. See Annex II for details.

5/ Results using shocks at the 65th-90th percentile of past crises, and crisis country identification using crisis probabilities of 1-10 percent from the IMF Vulnerability Exercise. See Annex III for details.

¹³ Annex I includes an additional assessment based only on quotas and the NAB in response to many Directors' remarks not to pre-suppose future discussions on the renewal of the BBAs.

¹⁴ The assumption is in line with the average plus one standard deviation of reserve usage for emerging markets and advanced economies during the GFC.

¹⁵ Beyond these swap agreements, no additional bilateral borrowing is assumed.

8. Applying a longer-term perspective—used as any quota increase will likely determine the Fund’s permanent resources through at least the middle of the next decade—leads to much higher resource demands than in the 2017 paper (Table 2 and Annexes II-III):¹⁶ Specifically, extending the analysis with refinements through 2025 increases the demand for Fund financing in the top borrowers approach to SDR 465-931 billion, and nearly doubles the estimates under the panel logit (to SDR 439-1,870 billion) and the global scenario analysis (to SDR 231-1,984 billion).

Table 2. Impact of a Longer-term Perspective on Potential Demand for Fund Resources

Approach	(In SDR billions)	
	2017 Paper	Refinement and longer-term perspective
Access-based ^{1/}		
Top borrowers ^{2/}	371-743	465-931
Panel logit model	282-1,176	439-1,870
Global scenarios ^{3/}	143-1,391	231-1,984

1/ Assumes program sizes of 4 to 8 percent of GDP as discussed in the 2017 paper. For details, see Annex II.

2/ The top 12 borrowers in the 2017 paper and the top 6 borrowers in the last column.

3/ Results using shocks at the 65th-90th percentile of past crises, and crisis country identification using crisis probabilities of 1-10 percent from the IMF Vulnerability Exercise. For details, see Annex III.

9. An additional approach suggests that potential demand for Fund financing in a moderate crisis could exhaust the Fund’s lending capacity (Box 1). This approach draws on past crises and a similar approach used in the context of the 14th Review. In a crisis where borrowers’ GDP as a share of global GDP is in line with the average during past crises since the 1980s excluding the GFC (10.8 percent of global GDP), and where the average program size is 6 percent of members’ GDP, financing needs would reach SDR 548 billion.¹⁷

¹⁶ Since the metric-based approach has traditionally been backward-looking, this is assessed for the reference period 2015-2019 and not extended to 2025.

¹⁷ For comparison, the average of the global GDP coverage of borrowers during past crises including the GFC (when large buffers reduced the need for Fund financing) was 8.8 percent.

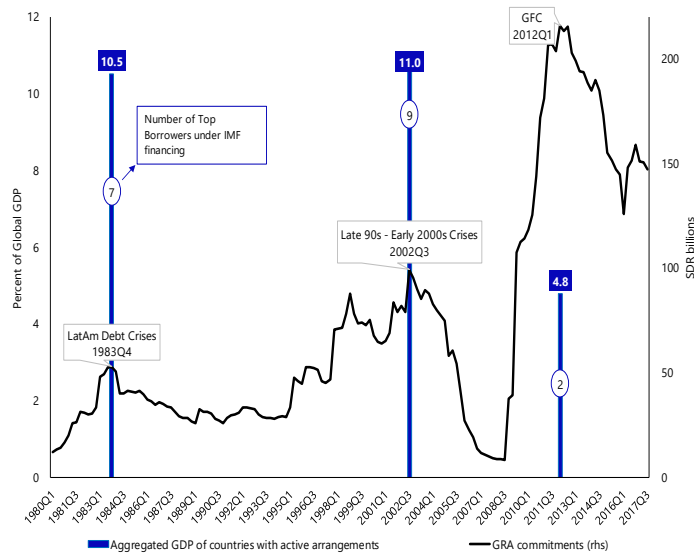
Box 1. An Additional Approach to Estimate Potential Calls for Fund Financing

This Box provides an additional approach, drawing on past crisis resource needs and building on an approach used in the 14th Review.^{1/}

The approach illustrates a crisis where borrowers’ GDP as a share of global GDP is in line with the average during past crises since the 1980s (blue bars of the Text Figure). As noted in the 2017 paper, during the GFC the global GDP coverage of members availing of Fund resources was much lower than the average in past crises, given larger buffers and the prolonged boom in commodity prices. However, there is no assurance that this will be repeated in the next crisis. If there was a new crisis and the size of countries needing Fund resources was closer to the average of past crises, excluding the GFC (10.8 percent of global GDP), financing needs based on an average access of 6 percent of their GDP would reach SDR 548 billion. This would be beyond the Fund’s current lending capacity based on quotas and the NAB.

1/ See *Fourteenth General Review of Quotas—The Size of the Fund—Initial Considerations* (3/15/10).

Peak of GRA commitments during Past Crises, 1980-2017^{1/2/}
(In billions of SDR, in percent (RHS))



Source: Staff calculations based on IMF data.

1/ The blue bars show the borrowers’ share of global GDP. Borrowers are countries that had an active GRA arrangement at the time of the peak of past crises (both precautionary and non-precautionary arrangements).

2/ The circles indicate the number of the top 12 past borrowers with active arrangements at the peak of the crisis. The top 12 past borrowers are selected from the list of all members that had a Fund GRA arrangement or requested outright disbursements since 1990, ranked by their projected 2025 GDP as a proxy for their size.

Qualitative Pillar

10. This section responds to Directors’ request to refine the qualitative pillar. In the September 15th discussion, Directors appreciated the analysis of qualitative considerations to complement the quantitative approach. They generally shared the analysis in staff’s background paper that ongoing global transitions, together with increased interconnectedness, are creating uncertainty and could lead to spillovers, contagion, and systemic risks, thereby having implications for the adequacy of Fund resources. Many Directors considered that the discussion of the qualitative considerations should give more prominence to factors that could reduce the demand on Fund resources, such as the significant expansion of the GFSN and the reforms implemented since the GFC.

11. As outlined in the 2017 paper, increasing interconnectedness and other global economic transitions create risks and uncertainties for the global economy. Global integration yields many benefits to countries, including more efficient allocation of resources and risk

diversification. But it also exposes them to spillovers, contagion, and systemic risks. And countries are vulnerable to risks from other medium- and long-term transitions, including from demographic trends, climate change, and technological change. These transitions could use up buffers needed to withstand shocks and even develop into financial crises, if an unfavorable set of circumstances occur. For instance, financial crises could develop in a world where the Fund is under-resourced, Regional Financial Arrangements (RFAs) are not prepared to deal with the magnitude of the shock, and reaching a multilateral agreement in a multipolar world to shore up the Fund and other institutions takes time (see Annex IV for examples of such scenarios).

12. Post-crisis reforms have enhanced the resilience of countries and the international monetary system (IMS) but significant vulnerabilities remain. The international community initiated reforms and made significant progress in enhancing the global economy’s resilience to systemic shocks: strengthening IMF surveillance, implementing the financial regulatory reform agenda, enhancing the global financial safety net and IMF lending toolkit, and updating the frameworks for sovereign debt restructuring. Nonetheless, some reforms have yet to be completed and gaps remain. Ongoing reforms remain focused on vulnerabilities exposed by the last crisis, while new challenges are emerging. Moreover, after nearly a decade of building support for ambitious reforms since the GFC, some reforms remain incomplete and the risk of reform fatigue—along with pressures to relax standards and regulation—could rise.

- **Fund surveillance.** In response to perceived weaknesses in IMF surveillance exposed by the GFC, the IMF upgraded its surveillance framework: with deeper assessments of risk, spillovers and interconnections; renewed emphasis on external stability: the regular publication of the External Sector Report; and greater focus on financial stability.¹⁸ A survey conducted in the context of the ongoing Interim Surveillance Review finds that members believe Fund surveillance has improved since 2014. Yet, IMF surveillance is only impactful if the Fund’s policy advice is implemented. And surveillance must be upgraded periodically, with the landscape continuing to evolve at a rapid pace, as a result of global trends, challenges, and opportunities.
- **Financial regulatory reforms.** The Fund has stepped up its coverage of financial sector issues and the G-20 launched an extensive program of reforms. As a result, banks have continued to build higher and better quality capital and liquidity buffers and the implementation of the frameworks for global systemically important banks as well as derivatives are advancing. That said, work is not yet complete. The FSB has noted that progress has been uneven¹⁹, and there are pushbacks on the horizon, including to postpone implementation, dilute prudential standards, lower capital requirements, replace the risk-based framework with a leverage ratio, and reduce the independence and power of supervisory bodies. Other challenges include the need for further strengthening national resolution regimes and developing cross-border resolution. Reforms on regulation of shadow banking entities remain at an early stage. Moreover, the financial sector is evolving rapidly and new risks are emerging, such as from

¹⁸ See the [2011 Triennial Surveillance Review—Overview Paper](#) (8/26/11) and the [2014 Triennial Surveillance Review—Overview Paper](#) (7/30/14).

¹⁹ See Financial Stability Board, [Implementation and Effects of the G20 Financial Regulatory Reforms](#), July 2017.

cybersecurity, or will likely emerge, including from fintech. Regulated institutions will continue to adapt to tighter regulations, including through innovations, and risks could shift to other areas—while financial regulations could be slow to respond.²⁰

- **GFSN.**²¹ Reserves remain high compared to the pre-GFC average, as countries value their predictability and reliability as a form of self-insurance. Resources under existing RFAs have increased and new RFAs and facilities have been established. Bilateral swap lines between central banks expanded dramatically during the crisis and have since evolved, with core advanced economies (AEs) maintaining their network of swaps indefinitely. The effectiveness of the 14th General Review of Quotas has doubled the Fund’s permanent resources, while the NAB was renewed for a further five years through November 2022 and a new set of BBAs agreed through 2019–2020. Yet, the GFSN needs further reforms. Overaccumulation of reserves has systemic costs as it supports external imbalances, diverts resources from more productive investments, and potentially increases volatility. And RFAs are mostly untested at the time of a systemic shock and coordination with other layers of the GFSN could pose problems.
- **IMF lending toolkit.** The Fund doubled access limits, streamlined conditionality, introduced new financing instruments that can be treated as precautionary (Flexible Credit and Precautionary Liquidity Lines), or rapid financial assistance (Rapid Financing Instruments and Rapid Credit Facility), or to signal commitment to reforms and catalyze financing (Policy Coordination Instrument). However, the use of precautionary instruments has been limited, owing in part to stigma associated with the need to approach the Fund.²² Other proposals to further strengthen the Fund’s crisis prevention role, such as the short-term liquidity swap (SLS) for potential short-term, frequent, and moderate balance of payments need, did not receive sufficient support.
- **Sovereign debt restructuring frameworks.** The Fund has reviewed its legal and policy framework for sovereign debt restructuring, particularly introducing more flexibility into its lending framework for exceptional access, to assist members return to medium-term viability, while avoiding unnecessary costs to the country, its creditors, and the overall system. Major reforms in the U.S. and Europe since the GFC have also made policies regarding the bail-in of bank creditors significantly clearer. In addition, the Fund revised its policy on arrears to official bilateral creditors to permit Fund financing in the presence of arrears in certain carefully circumscribed circumstances to strengthen incentives for collective action. The Fund also endorsed enhanced provisions for international sovereign bonds to strengthen the contractual framework to address collective action problems in sovereign debt restructuring, avoid protracted negotiations, and secure creditor participation. Substantial progress continues to be made in incorporating enhanced collective action clauses in international sovereign bond issuances. However, the outstanding stock of bonds without enhanced clauses remains a challenge. Moreover, further work is needed to strengthen the IMF’s framework for supporting

²⁰ See Levin and Lo, [A new approach to financial regulation](#), October 2015.

²¹ See [Adequacy of the Global Financial Safety Net](#) (3/10/16).

²² See [Adequacy of the GFSN—Considerations for Fund Toolkit Reform](#) (9/30/17).

debtor-creditor engagement, enhance official creditor coordination, especially against the backdrop of rising debt vulnerability in low-income countries, and improve data standards and reporting requirements of public debt from debtors and creditors.

C. Conclusions from the Pillars

13. The two-pillar framework continues to make a case for at least maintaining existing Fund resources.

While the quantitative estimates are somewhat lower after factoring in refinements suggested by Directors, these reductions tend to be more than outweighed when the analysis is extended through the middle of the next decade. These estimates suggest that at least maintaining the size of the Fund will ensure that the potential financing needs of members are covered over a wide range of scenarios. In particular, allowing the 2016 BBAs to expire without any offsetting increase in quota resources would leave the Fund under-resourced to meet the needs of

crisis countries in more than half of the access-based and global scenarios (Text Figure). Qualitative considerations remain important to help the membership form a judgment on the appropriate size of the Fund and quota increases, and the updated analysis presented in the previous section, and summarized in Table 3, highlights not only reforms since the GFC but also uncertainties in the global environment and IMS. The analysis suggests that reforms since the GFC are not sufficient to offset risks and uncertainties facing members. Taken together, the two-pillar analysis continues to make a case that the Fund’s resources, which constitute a reliable and central pillar of the GFSN, should not decline.

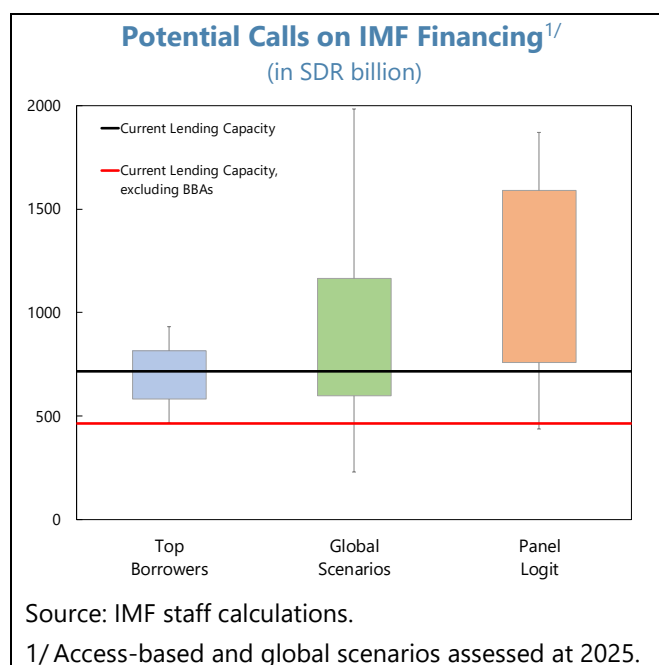



Table 3. Overall Assessment of the Qualitative Considerations

Qualitative Consideration	Potential Impact on the Size of Fund Resources	Explanation
Global Environment		
Interconnectedness	Impact on efficiency and growth	↓ Greater economic integration enables more efficient allocation of resources and the transfer of technologies, that in turn supports growth. Growth enhances countries' resilience, reducing the need for Fund financing.
	Diversification of risks	↓ Capital flows allow countries with excess savings to reduce risks by diversifying their lending and investment.
	Spillovers and contagion	↑ Increasing cross-border spillovers expose countries to financial stability risks and macroeconomic volatility boom-bust cycles, complicating macroeconomic management, and increasing the potential need for Fund financing.
Long-term uncertainties	↑ ↓	The global environment is changing rapidly. Previous financial crises highlighted the difficulty of recognizing the build-up of new risks and vulnerabilities in a timely manner. A more fragmented world could reduce support for multilateral institutions.
Resilience of the System		
Country Level		
Country buffers	Reserve accumulation	↓ ↑ Reserve accumulation allows holders to adjust to external shocks, reducing the need for Fund financing. However, overaccumulation also reinforces external imbalances and increases financial flow volatility and systemic risk, increasing the need for Fund financing.
	Macro policies, instruments, and financial supervision and regulation.	↑ Policy space remains low in many advanced economies. Real exchange rate adjustment has played a limited role in facilitating adjustment. Countries are still learning on how to best calibrate macroprudential tools. This increases the need for Fund financing.
	Potential growth and productivity	↑ Potential growth prospects are weighted down by demographic trends and modest recovery of total factor productivity growth, reducing countries' resilience, and increasing the need for Fund financing.
Country level surveillance	↓	The Fund upgraded its surveillance framework, reducing the need for Fund financing. That said, outcomes depend on countries' implementation of Fund policy advice.
Multilateral Level		
Global financial safety net	RFA and BSA expansion	↓ RFAs and BSAs have increased resources and introduced new instruments. While access remains unpredictable, coverage is uneven, and coordination among layers of the GFSN untested, this reduces the need for Fund financing.
	Fund lending toolkit reform	↑ The Fund lending toolkit was upgraded to increase coverage of member needs, increasing potential use of Fund financing. However, stigma in approaching the Fund remains.
	Sovereign debt restructuring reforms	↓ Policy frameworks that guide restructuring should help reduce financial spillovers from situations of sovereign debt distress.
Multilateral surveillance	Fund multilateral surveillance	↓ The 2012 ISD clarified the Fund's role in multilateral surveillance, while not expanding members' obligations. The impact depends on countries' implementation of Fund policy advice.
	Post-crisis reform agenda	↓ ↑ Reforms to build resilient financial institutions, end too-big-to-fail, make derivatives market safer, and transform shadow banking into resilient market-based finance are ongoing but progress is uneven and the financial sector is rapidly evolving.
	Other fora: G7, G20	↓ These fora facilitate multilateral cooperation, notably in the aftermath of the GFC. In the absence of a crisis, policy coordination has been more challenging.
 Increasing the size of Fund resources Decreasing the size of Fund resources		

D. Illustrative Scenarios and Simulations

14. Three illustrative quota increases are presented, centered on broadly maintaining Fund resources, assuming the NAB stays at its current level and the BBAs expire over 2019-20. To maintain the Fund’s current resource envelope, as suggested as a minimum by the two-pillar framework, an increase in quotas of somewhat above 75 percent would be needed.²³ Against this backdrop the illustrative scenarios on quota increases used in simulations in the following sections on realignment of quota shares center on a quota increase of 75 percent plus/minus 25 percentage points for symmetric alternative scenarios (Table 4). To put these increases into context, excluding the “lost” 2000 decade when no general quota increase took place, the average quota increase was 86 percent per decade for the previous 50 years, and over 100 percent per decade during 1970-2000.

Table 4. Illustrative Quota Increase^{1/ 2/ 3/}
(In SDR billions, in percent)

	Total Resources	Total Quotas	Quotas share in Total resources	Total Lending Capacity
December 2017 (Current)	977	477	49	715
Mid-2020s (Quotas + NAB)				
No quota increase	659	477	72	463
50 percent quota increase	898	716	80	623
75 percent quota increase	1017	835	82	702
100 percent quota increase	1136	954	84	782

Sources: Staff estimates based on IMF data.

1/ Current total resources comprise quotas, the NAB, and BBAs; it is assumed that all the commitments under the 2016 BBAs as of end-November become effective by end-April 2018.

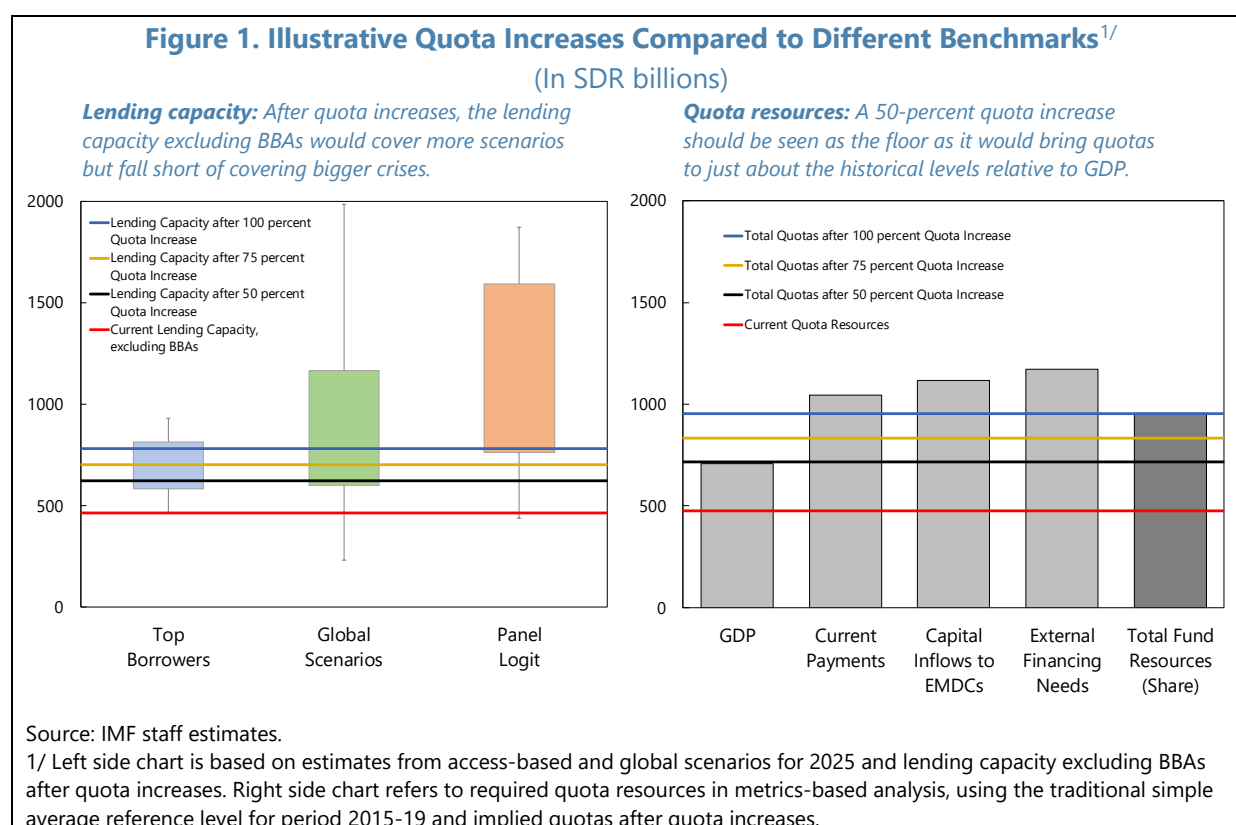
2/ The projections for the mid-2020s assume that the NAB is renewed at its current level for another five-year period from November 2022 and the BBAs are permitted to expire.

3/ Total resources refer to all quotas and effective borrowing agreements under both the NAB and the BBAs. Lending capacity represents the usable resources (both quota and borrowing) potentially available for non-concessional lending, net of prudential balance. For further details see Box 1 in the 2017 paper.

- A **75 percent quota increase** would broadly maintain the Fund’s overall lending capacity by replacing the BBAs after they expire, allowing the Fund to cover the central top borrowers scenarios and a part of the central range of the global scenarios. It would, however, only cover the lower range of the panel logit approach (Figure 1, left panel). A 75 percent quota increase would not achieve the levels needed to restore historical ratios of quotas to traditional external indicators (Figure 1, right panel). The share of quotas to total Fund resources would also remain below the long-term average of 84 percent over 1978-2008.

²³ The required size of the quota increase to replace the lending capacity of the 2016 BBAs is 79 percent given the larger amount of commitments due to new participants (the required increase to replace the lending capacity of the 2012 BBAs was 70 percent).

- A **100 percent quota increase** would cover more central global scenarios and some panel logit scenarios though it would still not allow the Fund to cover bigger crises. The increase would raise quotas to just below historical levels relative to current payments, but fall short by a larger margin relative to other external indicators. It would also bring the share of quotas in total resources to its long-term average.
- A **50 percent quota increase** could be seen as the floor suggested by the traditional metrics for the reference period 2015-19 as it would bring quotas to just about the historical levels relative to GDP. However, it would leave the share of quotas to total Fund resources significantly below its long-term average. Such an increase would also not be sufficient to allow the Fund to cover some financing calls under the central top borrowers scenarios and the coverage of the global and logit panel scenarios is rather limited.
- While not part of the illustrative scenarios of quota increases below, a **125 percent quota increase** could help cover additional scenarios and restore the resource envelope of quotas relative to global indicators for the reference period 2015-19 (namely, 112 percent using the simple average of reference ratios). See Annex I for details.



E. Composition of Resources

15. The Fund has traditionally handled most crises using its permanent quota resources. Quota resources have several advantages over borrowing, including permanence (and reliability), broader burden-sharing, and greater operational flexibility. Moreover, while quota resources are

readily available for use based on majority decisions that rest with the Executive Board, activation of the NAB (and, by extension, BBAs) requires a higher bar—support from a supermajority of lenders, under conditions that threaten the stability of the IMS.²⁴ Also, mobilizing new borrowed resources traditionally takes considerable time even under the best of circumstances.²⁵ More generally, concerns have been raised in the past that excessive reliance on borrowing from a subset of members could raise fundamental issues about the cooperative character and governance of the Fund.

16. Previous occasions where the Fund has relied on borrowing have typically signaled a need for and preceded general quota increases. For instance, the Fund borrowed under the GAB in July 1998, in connection with the augmentation of the Extended Arrangement for Russia, and subsequently, under the NAB in December 1998, in connection with the Stand-By Arrangement for Brazil. The amounts borrowed in both cases were fully repaid in early 1999, when the quota increases under the 11th Review took effect. Similarly, the Fund’s extensive reliance on BBAs and the NAB in the wake of the GFC preceded the quota increases under the 14th Review. The Fund also previously relied heavily on borrowing between 1974 and 1984, reflecting strong demand for Fund resources and the need to bridge to quota increases under the 7th and 8th Reviews.²⁶

17. Overall, staff believes that the Fund’s traditional model of relying primarily on its permanent quota resources, supplemented by standing borrowing arrangements, has served the membership well. It has provided the Fund with the flexibility to respond quickly to a wide range of shocks, in line with the Fund’s central role in the GFSN. While the appropriate mix between quotas and borrowed resources is a matter of judgment, previous decisions on quotas and the NAB/GAB in the three decades preceding the GFC point to a consistent preference for a structure where quotas constitute the predominant share.

QUOTA FORMULA

The September 1st discussion highlighted that significant differences of view remain on many key issues for a new quota formula. This section briefly takes stock of these views and summarizes the findings of additional staff work responding to requests by Directors.

18. In their report to the Board of Governors, Directors noted that the 15th Review provides an opportunity to continue the process of realigning members’ quota shares in line with their evolving relative positions in the world economy.²⁷ The quota formula seeks to

²⁴ For further details on the composition of Fund Resources see [Adequacy of Fund Resources—Further Considerations](#) (7/31/17).

²⁵ For example, it still took about one year to mobilize the needed resources under the GFC, even when there was a broad consensus in the international community on the need for urgent action.

²⁶ See *Borrowing in the Fund—A Chronological Review* (7/25/95).

²⁷ *Progress on the Fifteenth General Review of Quotas—Report of the Executive Board to the Board of Governors* (10/4/17). See also [The Chairman’s Concluding Remarks—Fifteenth General Review of Quotas—Quota Formula and Realigning Shares](#) (9/7/17).

provide a reasonable measure of members' relative economic positions and thereby serves as a guide, rather than a mechanical rule, to changes in the structure of quotas.

19. Considerable support was expressed for the view that the principles that have guided previous deliberations on the formula remain valid. Specifically, the formula should (i) be simple and transparent; (ii) be consistent with the multiple roles of quotas; (iii) produce results that are broadly acceptable to the membership; and (iv) be feasible to implement statistically based on timely, high quality and widely available data.

20. However, views differed on the extent to which the current quota formula conforms to these principles. One view is that the formula is working well and continues to deliver higher calculated quota shares to dynamic economies. Another view is that the current formula fails to reflect realities in the global economy and requires a major overhaul toward a GDP-centered formula.

21. It was recognized that the formula has already been discussed extensively, including under the 2013 Quota Formula Review (QFR), and many Directors expressed a willingness to build on the progress already made. This included general support for the view that GDP should remain the most important variable, though views continued to differ on its weight and the composition of the GDP blend. There was also continued support from most Directors for dropping variability (though for a number of them, this support was conditional on other elements of the reform package), while a few were still not convinced. Openness remains important for many, but views varied on its appropriate weight and measurement. Views ranged from increasing the weight of openness and maintaining the current methodology, to lowering its weight, introducing a cap, and excluding intra-currency union trade. Views also remained divergent on whether reserves and compression should be maintained at their current levels, adjusted, or eliminated.

22. Staff's technical exercise to identify reforms that yield results near the midpoint of those implied by the current formula and a GDP-only formula attracted a range of views.²⁸ A number of Directors found this a useful exercise to illustrate possible pathways toward a middle ground. Many others, while welcoming staff's attempts to look for areas of consensus, felt that it does not adequately represent the range of views being expressed, gives too much prominence to a GDP-only formula, and, in their view, is not in line with the 2013 QFR.

23. Views also remained divided on whether, and if so how, to take account of voluntary financial contributions. Many Directors supported, or were open to, taking account of such contributions in quota adjustments under the 15th Review, with a few preferring their inclusion in the quota formula. Many other Directors continued to oppose or express reservations about such approaches.

²⁸ Using different parameter restrictions, this technical exercise identified formulas that would most closely approximate the "midpoint", i.e., the distribution based on a simple average of members' shares in the current quota formula and members' shares based on the current GDP blend variable.

24. Directors reiterated their commitment to protect the quota and voting share of the poorest members under the 15th Review. Views varied on the precise definition of poor countries to be protected, and many Directors called for protection also for small member states.

25. In response to Directors' requests, staff has conducted further technical work in two areas. First, staff has updated its earlier analysis of the relationship between variability and balance of payments difficulties using the most recent data. On the relationship between variability and Fund arrangements, staff has also explored the impact of breaking up the dataset into different country groups. In both studies, reported in more detail in Annex V, the calculated correlations are very weak and sometimes negative. These results are consistent with earlier staff work that suggests that variability does not capture its intended purposes in the formula. Second, staff also assessed the extent to which market exchange rate (MER) GDP and PPP GDP have converged since PPP GDP was included in the GDP blend in 2008. While convergence between the levels of MER and PPP GDP (i.e., price level convergence) has been modest, the ratio of MER to PPP GDP shares for EMDCs as a whole has converged more markedly, mainly driven by higher GDP growth in EMDCs relative to AEs as a whole (more details in Annex VI).

REALIGNING QUOTA SHARES

This section first discusses the approaches to quota adjustments that have facilitated the required broad consensus for changes in quotas in previous general reviews. It then presents a limited set of purely illustrative simulations to show how different quota formulas, sizes of overall increases, and allocation methods may interact to determine changes in the distribution of members' actual quota shares.

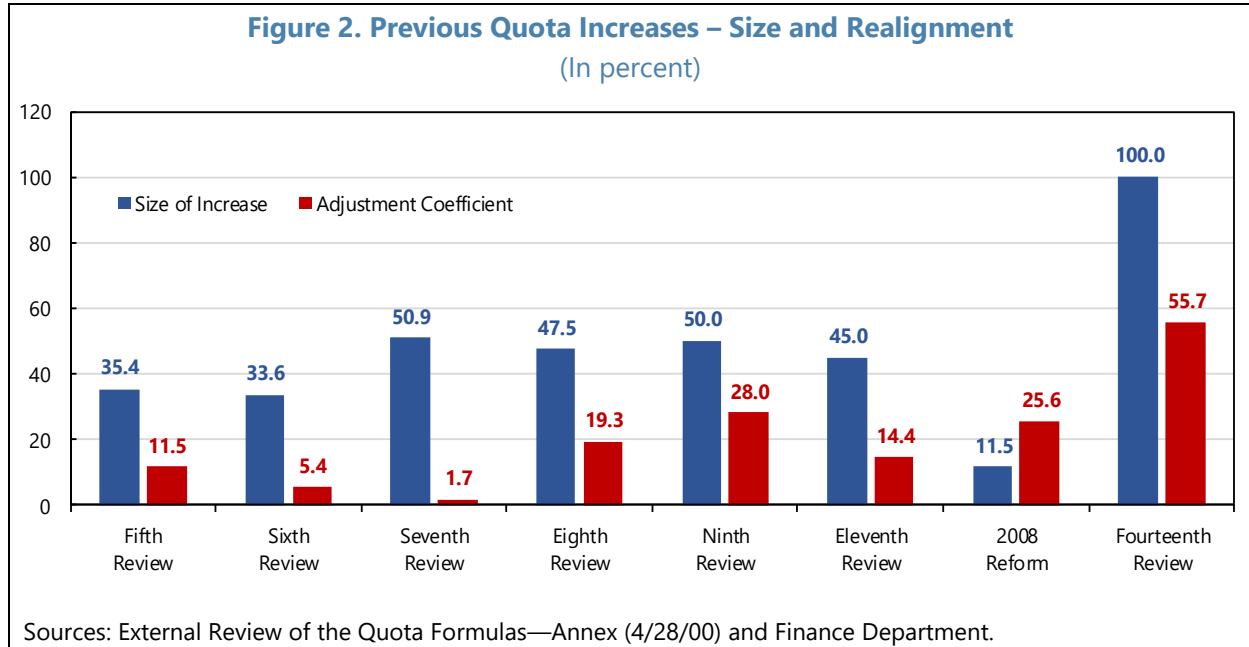
A. Quota Adjustments in Past Reviews

26. Achieving the necessary broad support for quota increases requires significant compromise. An 85 percent majority of total voting power is required in the Board of Governors for any change in quotas. Garnering this broad support typically requires a willingness to compromise from all sides on both the size of the overall quota increase as well as the extent and distribution of adjustments in quota shares. In the context of the 15th Review, the objective of agreeing on a new quota formula adds a further element to the needed compromises.

27. In practice, the agreed shifts in actual quota shares toward calculated quota shares in previous reviews have been only partial. The overall degree of adjustment can be measured by the degree in which deviations between actual quota shares (AQS) and quota formula based calculated quota shares (CQS) are reduced. In past reviews, convergence toward CQS was expressed in terms of the adjustment coefficient,²⁹ which ranged between 1.7 and 28.0 percent from the 5th to

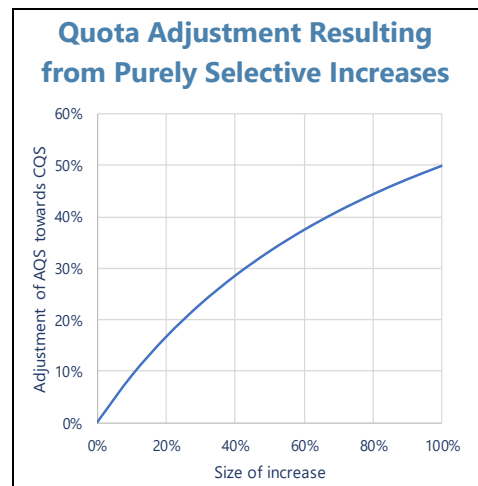
²⁹ The adjustment coefficient is calculated as the relative reduction in the "root mean-squared deviation" between AQS and CQS across all members; a full realignment toward CQS yields a coefficient of 100 percent. An alternative measure is the relative reduction in aggregate out-of-lineness (OOL, sum of positive deviations between CQS and AQS, or half of the sum of absolute deviations). Both measures tend to yield broadly similar results. For instance, the 2008 Reform resulted in an adjustment coefficient of 25.6 percent and a reduction of 28.9 percent in OOL (from 15.0

the 11th Reviews, and reached 55.7 percent in the 14th Review, given its heavy focus on governance reform (Figure 2).



28. This pattern of partial adjustments reflects several factors, including:

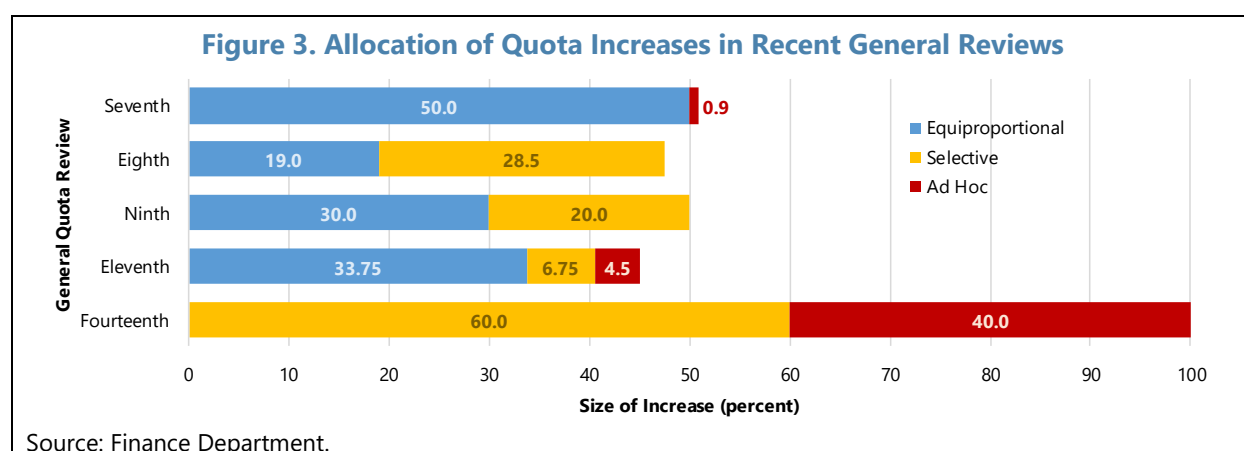
- First, as noted above, a broad consensus is needed for any change in quotas, including from members whose quota shares stand to decline as part of a general review. This means that the scope for reducing under-representation typically needs to be balanced against potential limits on the extent to which over-represented members’ quota shares are diluted.
- Second, as a purely technical matter, the use of selective increases based on the quota formula results in a partial adjustment, with the new quota shares reflecting a weighted average of existing quota shares and those produced by the formula. For example, a 100 percent quota increase distributed solely based on the formula results in a 50 percent adjustment toward calculated quota shares (Text Figure).
- Third, the quota formula only serves as a guide, and questions about the reasonableness of the results generated by the formula may limit its role in actual quota adjustments.



to 10.6 percentage points). The 14th Review resulted in an adjustment coefficient of 55.7 percent and a reduction of 50.6 percent in OOL (from 10.7 to 5.3 percentage points).

- Fourth, other considerations, such as the need to increase the Fund’s overall resource base or concerns about preserving members’ voice and access to Fund resources may play a role in allocation decisions.
- Fifth, some members may choose to voluntarily forego part of the quota share increase to which they may otherwise be eligible.

29. A number of options are available to limit the extent to which members’ shares are diluted. As discussed in the [August 2017 paper](#) on the quota formula and realigning shares, three broad elements have been used to distribute previous general quota increases: (i) *equiproportional increases*, which go to all members and leave existing quota shares unchanged; (ii) *selective increases*, which also go to all members in proportion to their calculated quota shares under the formula; and (iii) *ad hoc increases*, which are distributed to a subset of members based on agreed criteria (Figure 3). In previous reviews prior to the 14th Review, a sizable equiproportional element was typically included, which had the effect of dampening the adjustment in quota shares. Ad hoc increases have also been used to protect some members (e.g., the poorest) against any decline in quota share, or to limit the maximum size of any member’s decline in shares.



30. While larger quota increases can provide more room for potential share adjustments, the relationship is not automatic and depends on how the increase is distributed. For example, as illustrated in Figure 2, the size of the quota increases from the 7th to the 11th Reviews was broadly similar (45 to 51 percent), but the adjustment coefficient varied considerably (from 1.7 to 28 percent). This primarily reflected changes in the relative size of the equiproportional element. In contrast, a sizeable adjustment (25.6 percent) was achieved with a relatively small overall increase under the 2008 Quota and Voice Reform (“2008 Reform”), which involved targeted ad hoc increases for 54 under-represented members.

31. Ad hoc increases can also be used to further boost the shares of selected members or to introduce an alternative distribution metric to the quota formula. Examples of the former include targeted increases for particularly under-represented members or members expected to

contribute to the Fund’s liquidity over the medium term.³⁰ The 14th Review was a notable example of the latter, as 40 percent of the overall increase was distributed primarily to members that were under-represented relative to the compressed GDP blend variable, rather than the results of the quota formula. This approach reflected the widespread misgivings about the formula and the urgency of agreeing on a quota increase in the wake of the GFC, which led to the timetable for the review being advanced by two years and did not allow time for possibly protracted discussions on a new formula.

32. The remainder of this section presents some purely illustrative simulations of quota increases under the 15th Review. These simulations seek to illustrate some of the above points and the potential impact of different quota formulas on the distribution of actual quota shares, building on work presented previously in the August 2017 paper. These simulations aim to facilitate the ongoing discussions on the formula and the possible parameters of any quota increase, recognizing that any agreement on a quota increase and a new quota formula is expected to be reached as a package. This means that all elements could potentially contribute to reaching the necessary broad consensus on any individual element.

B. Illustrative Simulations³¹

33. The illustrative simulations are based on quota increases ranging from 50-100 percent and three alternative quota formulas. As discussed earlier, simulations are presented for quota increases of 50, 75 and 100 percent, centered on broadly maintaining Fund resources assuming that the NAB is maintained at its current level and the BBAs expire. Three illustrative formulas from the August 2017 paper are used, seeking to capture some of the divergences in views expressed in previous discussions, and to illustrate how different formulas may impact the distribution of actual quota shares in a general quota increase. It should be stressed that these approaches are intended to be purely illustrative and that many alternatives are possible, recognizing that views have yet to converge in any significant manner.

- **Formula 1.2** eliminates variability and redistributes two-thirds of its weight to GDP and one-third to openness, broadly in proportion to the current weights of the two variables. As such, this formula could be seen to represent one broad view that the current formula is working well, while recognizing continued support from most Directors for dropping variability.
- **Formula 3.2.c** has the same weights for formula variables as Formula 1.2, but includes a cap on openness (the ratio of openness shares to GDP blend shares is capped at 1.8). This illustrates an approach that seeks to address one possible concern about openness by limiting the overall boost that individual countries receive from the variable.

³⁰ For an overview of selective and ad hoc increases prior to the 2008 Reform, see Box A.2 in [Quota Distribution—Selected Issues](#) (7/17/03). For more details on the allocation in the 2008 Reform and in the 14th Review, see Annex VII.

³¹ This section presents summary results for the main country groups and the largest members. Detailed results by member are presented in a separate Statistical Appendix.

- **Midpoint Set C Formula** is the formula resulting from the least restrictive set of constraints in the midpoint approach illustrated in the August 2017 paper. This formula illustrates possible reforms that generate shares near the midpoint of the range of views expressed so far.

34. All simulations presented below include an ad hoc element to protect the quota and voting shares of the poorest members. As in the August 2017 paper, the simulations are based on the updated definition of the poorest used in the 14th Review (i.e., the 37 PRGT-eligible countries that meet the IDA per capita GNI cut-off). As discussed previously, alternative eligibility lists for protection can be considered. These include the full list of PRGT-eligible countries (70 members) and adding small member states as called for by many Directors in the September 1 discussion. Annex VIII discusses these alternative definitions, presents a possible list of small developing states, and illustrates the impact of using such a broader list on the overall distribution of actual quota shares.³²

Selective Increases

35. The first set of simulations shows purely selective increases (except for the small share allocated to protection of the poorest). As noted previously, selective increases based on the formula have played an important role in previous general quota reviews, notably the 8th, 9th and 14th Reviews (Figure 3). This method results in a uniform and proportional adjustment of the actual quota shares of all members toward calculated quota shares. Purely selective increases result in new quota shares for each member that are within the range of their respective AQS and CQS, avoiding “anomalies” such as an over-represented member becoming under-represented, or an under-represented member having a decline in its quota share.

36. The main findings, summarized in Tables 5 and 6, are:

- The increase in quota shares for EMDCs as a group ranges from 2.7 to 4.4 pp, mostly depending on the size of the overall increase, and is only modestly affected by the formula used.
- The distribution of the corresponding decline in the shares of AEs between major and other AEs differs significantly depending on the formula: for Formula 1.2, major AEs bear nearly 90 percent of the loss; for formulas 3.2.c and Midpoint Set C, major AEs account for about two-thirds of the decline (by comparison, major AEs represent 75 percent of current AQS of AEs).
- The aggregate share of low-income countries (LICs) declines modestly (0.1 to 0.2 pp), reflecting net declines for the group of LICs that are not eligible for protection under the updated 14th

³² For example, under the updated 14th Review criteria for protection, approximately 99.2 percent of the increase is made in a selective manner using formula 1.2 and the remainder (0.8 percent) is allotted for protection. For an overall quota increase of 100 percent, this translates into a reduction in quota shares of non-protected members of up to 0.06 pp in absolute terms, or up to 0.54 percent in relative terms. If the protection list is expanded to the broadest definition (PRGT-eligible countries plus small developing states), the share of the selective increase is reduced to 98.6 percent, and the maximum decline in quota shares for non-protected members is 0.11 pp in absolute terms, or 0.99 percent in relative terms.

Review list. This decline would be avoided using a broader protection list of PRGT-eligible countries or PRGT-eligible plus small developing states (see Annex VIII).

- Aggregate out-of-lineness (currently about 12 percentage points under all formulas) is reduced by one-third, two-fifths and one-half for quota increases of 50, 75 and 100 percent, respectively. In other words, with a doubling of quotas, such an approach could achieve a similar overall adjustment toward CQS to that in the 14th Review.

Table 5. Summary Results – Selective Increase^{1/}
(In percentage points, unless otherwise indicated)

	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula		
	50%	75%	100%	50%	75%	100%	50%	75%	100%
Changes in quota shares									
Major Advanced Economies	-2.4	-3.1	-3.6	-2.0	-2.6	-3.0	-1.8	-2.3	-2.7
Other Advanced Economies	-0.3	-0.4	-0.5	-0.9	-1.2	-1.4	-0.9	-1.2	-1.4
Emerging Market and Developing Countries	2.8	3.5	4.1	2.9	3.8	4.4	2.7	3.5	4.1
of which: Low Income Countries	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2
Overall quota shares realignment									
Initial Aggregate Out-of-lineness (p.p.)	12.1	12.1	12.1	12.0	12.0	12.0	12.2	12.2	12.2
Final Aggregate Out-of-lineness (p.p.)	8.2	7.0	6.2	8.1	7.0	6.1	8.3	7.1	6.3
Reduction in Out-of-lineness (percent)	32%	42%	49%	33%	42%	49%	32%	41%	48%

Source: Finance Department.

1/ Specifications of illustrative formulas:

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

Formula 3.2.c: $(0.60 \cdot \text{GDP} + 0.35 \cdot \text{Openness} + 0.05 \cdot \text{Reserves})^{0.95}$, with 60/40 GDP blend (MER/PPP) and the ratio of openness shares to GDP blend shares capped at 1.8.

Midpoint Set C Formula: $(0.775 \cdot \text{GDP} + 0.200 \cdot \text{Openness} + 0.025 \cdot \text{Reserves})^{0.975}$, with 60/40 GDP blend (MER/PPP).

Table 6. Illustrative Allocations – Selective Increase^{1/}
 (In percent)

	14th Review	Current Formula	Formula 1.2	Overall Increase			Formula 3.2.c	Overall Increase			Midpoint Set C Formula	Overall Increase		
				50%	75%	100%		50%	75%	100%		50%	75%	100%
Advanced economies	57.6	50.2	49.8	54.9	54.1	53.5	49.2	54.7	53.9	53.2	49.9	54.9	54.1	53.5
Major advanced economies	43.4	35.7	36.4	40.9	40.2	39.7	37.7	41.4	40.8	40.4	38.3	41.6	41.1	40.7
United States	17.4	14.5	15.2	16.6	16.4	16.2	15.6	16.8	16.6	16.5	17.4	17.3	17.3	17.3
Japan	6.5	5.1	5.1	6.0	5.9	5.8	5.3	6.1	5.9	5.9	5.3	6.1	5.9	5.9
Germany	5.6	5.0	4.9	5.4	5.3	5.2	5.1	5.4	5.4	5.3	4.7	5.3	5.2	5.1
France	4.2	3.2	3.2	3.9	3.8	3.7	3.4	3.9	3.9	3.8	3.2	3.9	3.8	3.7
United Kingdom	4.2	3.6	3.4	4.0	3.9	3.8	3.6	4.0	3.9	3.9	3.4	3.9	3.8	3.8
Italy	3.2	2.4	2.4	2.9	2.8	2.8	2.5	2.9	2.9	2.8	2.4	2.9	2.8	2.8
Canada	2.3	2.0	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.0	2.2	2.2	2.2
Other advanced economies	14.3	14.5	13.4	14.0	13.9	13.8	11.5	13.3	13.1	12.9	11.5	13.3	13.1	12.9
Spain	2.0	1.8	1.7	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.7	1.9	1.9	1.8
Netherlands	1.8	2.1	1.9	1.8	1.9	1.9	1.2	1.6	1.6	1.5	1.5	1.7	1.7	1.7
Australia	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4
Belgium	1.3	1.1	1.1	1.2	1.2	1.2	0.8	1.1	1.1	1.1	0.8	1.2	1.1	1.1
Switzerland	1.2	1.7	1.5	1.3	1.3	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Sweden	0.9	0.9	0.8	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.7	0.9	0.8	0.8
Austria	0.8	0.7	0.7	0.8	0.8	0.7	0.6	0.8	0.7	0.7	0.6	0.7	0.7	0.7
Norway	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.7
Ireland	0.7	0.8	0.7	0.7	0.7	0.7	0.4	0.6	0.6	0.6	0.5	0.7	0.6	0.6
Denmark	0.7	0.6	0.6	0.7	0.7	0.6	0.5	0.7	0.6	0.6	0.5	0.6	0.6	0.6
EMDCs 2/	42.4	49.8	50.2	45.1	45.9	46.5	50.8	45.3	46.1	46.8	50.1	45.1	45.9	46.5
Africa	4.4	3.7	3.6	4.4	4.3	4.3	3.7	4.4	4.4	4.4	3.4	4.3	4.3	4.3
South Africa	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6
Nigeria	0.5	0.7	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6
Asia	16.0	24.2	25.4	19.1	20.0	20.7	25.6	19.2	20.1	20.8	26.1	19.3	20.3	21.0
China 3/	6.4	12.6	13.3	8.7	9.3	9.8	13.7	8.8	9.5	10.0	14.3	9.0	9.7	10.3
India	2.7	3.1	3.4	3.0	3.0	3.1	3.5	3.0	3.1	3.1	3.8	3.1	3.2	3.3
Korea, Republic of	1.8	2.0	2.2	1.9	1.9	2.0	2.3	1.9	2.0	2.0	2.0	1.9	1.9	1.9
Indonesia	1.0	1.3	1.4	1.1	1.2	1.2	1.4	1.1	1.2	1.2	1.5	1.2	1.2	1.2
Singapore	0.8	1.3	1.2	0.9	1.0	1.0	0.7	0.8	0.7	0.7	0.9	0.8	0.8	0.8
Malaysia	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
Thailand	0.7	1.0	0.9	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.7	0.7	0.8
Middle East, Malta and Turkey	6.7	7.2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.3	6.6	6.6	6.5
Saudi Arabia	2.1	1.7	1.5	1.9	1.8	1.8	1.5	1.9	1.8	1.8	1.3	1.8	1.8	1.7
Turkey	1.0	1.2	1.2	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.2	1.1	1.1	1.1
Iran, I.R. of	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Western Hemisphere	7.9	7.4	7.6	7.8	7.7	7.7	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Brazil	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.6	2.4	2.4	2.4
Mexico	1.9	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8
Venezuela, R.B. de	0.8	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7
Argentina	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Transition economies	7.2	7.3	7.0	7.1	7.1	7.1	7.0	7.1	7.1	7.1	6.5	7.0	6.9	6.9
Russia	2.7	2.6	2.6	2.7	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Poland	0.9	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.9	0.8	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:														
EU-28	30.4	27.0	26.0	28.8	28.4	28.1	24.8	28.4	27.9	27.5	23.8	28.1	27.5	27.0
LICs 4/	3.3	2.3	2.2	3.2	3.2	3.1	2.3	3.2	3.2	3.2	2.1	3.2	3.1	3.1
Updated 14th Review Poorest 5/	1.7	1.1	1.0	1.7	1.8	1.8	1.1	1.7	1.8	1.8	1.0	1.7	1.8	1.8

Source: Finance Department.

1/ All simulations show distributions based on the quota formula (i.e., selective increases) plus ad hoc increases where needed to protect the shares of the poorest members.

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

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

4/ Currently PRGT-eligible countries.

 5/ Updated 14th Review list to include countries that are PRGT-eligible and meet the FY 2017 IDA per capita GNI cut-off of US\$1,185 (data through 2015) and twice that amount for small states, as defined by the IMF. Currently includes 37 member countries.

Equiproportional Increases

37. Equiproportional increases played a significant role in general quota increases prior to the 14th Review. On occasions, they comprised more than half or even the predominant share of the overall increase (Figure 3). However, no equiproportional element was included in the 14th Review given its strong focus on governance reform. As reported in the August 2017 paper, based on economic developments since the 14th Review, out-of-lineness has increased again to levels that now slightly exceed those prevailing prior to the 14th Review, depending on the formula used. Such out-of-lineness is also now more concentrated, with one member—China—accounting for half to two-thirds of total under-representedness, compared with just over one-third prior to the 14th Review.³³ Against this background, judgment will be needed on whether an equiproportional element should play any role in the 15th Review.

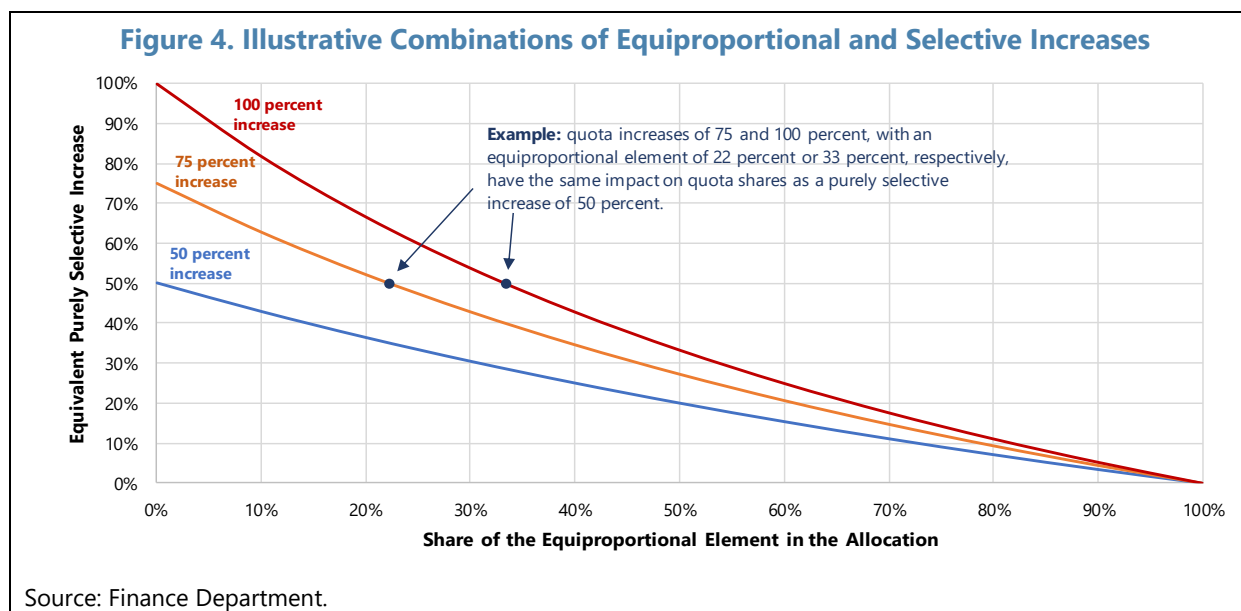
38. Pending further discussions, staff is not at this stage presenting simulations including an equiproportional element. However, it may be noted that the impact on AQS of a combination of equiproportional and selective increases is equivalent to the impact of a smaller overall increase that is distributed on a purely selective basis. This can be seen by separating the increase in two stages: first the equiproportional increase expands aggregate quotas, keeping the same structure; then the selective increase is added over the expanded base with an impact on AQS equivalent to a smaller increase over the original base. Table 7 illustrates this equivalence for different combinations of equiproportional and selective increases. For example, a 50 percent overall increase distributed on a fully selective basis would yield the same AQS as a 75 percent increase with a 22/78 equiproportional/selective split, and a 100 percent increase with a 33/67 split (Figure 4).

Table 7. Illustrative Combinations of Equiproportional and Selective Increases

Combination of Equiproportional and Selective Elements	50 percent increase		75 percent increase		100 percent increase	
	Resulting Split	Equivalent Purely Selective Increase	Resulting Split	Equivalent Purely Selective Increase	Resulting Split	Equivalent Purely Selective Increase
0/100 (all selective)	0/50	50.0	0/75	75.0	0/100	100.0
20/80	10/40	36.4	15/60	52.2	20/80	66.7
40/60	20/30	25.0	30/45	34.6	40/60	42.9
60/40	30/20	15.4	45/30	20.7	60/40	25.0
80/20	40/10	7.1	60/15	9.4	80/20	11.1
100/0 (all equiproportional)	50/0	0.0	75/0	0.0	100/0	0.0

Source: Finance Department.

³³ See Annex I of [Fifteenth General Review of Quotas—Quota Formula and Realignment Shares](#) (8/2/17).



Ad Hoc Increases

39. Ad hoc increases can help achieve the necessary broad support for a quota increase. In addition to protecting the poorest, ad hoc increases can be used to facilitate convergence toward the formula or any other agreed metric (as was the case for GDP in the 14th Review) and can also focus the increases more on specific member groups than would result from a purely selective increase. Moreover, ad hoc elements can be used to set constraints on the maximum size of any individual member’s quota share increase or decline. While providing significant flexibility, ad hoc increases can also create certain “anomalies” in the resulting quota shares, which may then need to be corrected with additional ad hoc adjustments.

Voluntary financial contributions

40. One example of the possible use of ad hoc increases discussed to date is to recognize significant voluntary financial contributions. The simulations below update those presented previously by including an ad hoc element to allocate 5 percent of the overall quota increase in proportion to a measure of members’ voluntary financial contributions to the Fund.³⁴ The remaining elements are the same as in the simulations presented above.

41. The results for this set of simulations are summarized in Tables 8 and 9. The ad hoc element to recognize voluntary financial contributions dampens the decline in quota share for some members that have made substantial voluntary contributions to the Fund’s finances, and leads to a

³⁴ Annex IX updates staff’s earlier work on possible composite measures of voluntary financial contributions. As in [Fifteenth General Review of Quotas—Quota Formula and Realigning Shares](#) (8/1/17), the version used here is VFCS II, which aggregates each member’s share across four types of contributions, with weights of 0.3 for the NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined, and 0.2 for capacity development (technical assistance and training). Annex IX illustrates also two alternative composite measures of voluntary financial contributions, and staff could conduct further work on this topic based on Directors’ guidance.

larger increase in quota shares for other such members than would result from a purely selective increase. In this way, it could be seen as providing explicit recognition of members' contributions. In aggregate, given that AEs provide a large share of voluntary financial contributions, the impact is to reduce the size of the shifts from AEs to EMDCs, by between 0.4 and 0.7 pp for the simulations presented here. The relative distribution of the shifts between major AEs and other AEs is broadly the same as in the simulations above. The resulting out-of-lineness is 0.3 to 0.6 pp higher for formulas 1.2 and 3.2.c, and 0.6 to 0.9 pp higher for the Midpoint Set C formula.

Table 8. Summary Results – Selective Increase with Ad Hoc Element in Proportion to Measure of Voluntary Financial Contributions (5 percent of total increase)
(In percentage points, unless otherwise indicated)

	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula		
	50%	75%	100%	50%	75%	100%	50%	75%	100%
Changes in quota shares									
Major Advanced Economies	-2.1	-2.7	-3.2	-1.7	-2.2	-2.5	-1.5	-1.9	-2.2
Other Advanced Economies	-0.2	-0.3	-0.3	-0.8	-1.0	-1.2	-0.8	-1.0	-1.2
Emerging Market and Developing Countries	2.3	3.0	3.5	2.5	3.2	3.7	2.3	2.9	3.4
of which: Low Income Countries	-0.1	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
Overall quota shares realignment									
Initial Aggregate Out-of-lineness (p.p.)	12.1	12.1	12.1	12.0	12.0	12.0	12.2	12.2	12.2
Final Aggregate Out-of-lineness (p.p.)	8.5	7.4	6.7	8.5	7.5	6.7	8.8	7.9	7.2
Reduction in Out of-lineness (percent)	30%	39%	45%	30%	39%	45%	28%	35%	41%

Source: Finance Department.

Table 9. Illustrative Allocations – Selective Increase with Ad Hoc Element in Proportion to Measure of Voluntary Financial Contributions (5 percent of total increase)^{1/ 2/}
(In percent)

	14th Review	Current Formula	VFCS II	Formula 1.2	Overall Increase			Formula 3.2.c	Overall Increase			Midpoint Set C Formula	Overall Increase		
					50%	75%	100%		50%	75%	100%		50%	75%	100%
Advanced economies	57.6	50.2	76.7	49.8	55.3	54.7	54.2	49.2	55.2	54.5	53.9	49.9	55.4	54.7	54.2
Major advanced economies	43.4	35.7	55.7	36.4	41.3	40.7	40.2	37.7	41.7	41.2	40.8	38.3	41.9	41.4	41.1
United States	17.4	14.5	5.3	15.2	16.4	16.2	16.0	15.6	16.6	16.4	16.2	17.4	17.1	17.1	17.0
Japan	6.5	5.1	21.3	5.1	6.3	6.2	6.2	5.3	6.3	6.3	6.3	5.3	6.3	6.3	6.3
Germany	5.6	5.0	7.4	4.9	5.4	5.3	5.3	5.1	5.4	5.4	5.4	4.7	5.3	5.2	5.2
France	4.2	3.2	6.9	3.2	3.9	3.9	3.8	3.4	4.0	3.9	3.9	3.2	3.9	3.8	3.8
United Kingdom	4.2	3.6	6.3	3.4	4.0	3.9	3.9	3.6	4.1	4.0	4.0	3.4	4.0	3.9	3.8
Italy	3.2	2.4	4.5	2.4	2.9	2.9	2.8	2.5	3.0	2.9	2.9	2.4	2.9	2.9	2.8
Canada	2.3	2.0	4.1	2.1	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.0	2.2	2.2	2.2
Other advanced economies	14.3	14.5	21.0	13.4	14.1	14.0	14.0	11.5	13.5	13.3	13.1	11.5	13.5	13.3	13.1
Spain	2.0	1.8	2.6	1.7	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.7	1.9	1.9	1.9
Netherlands	1.8	2.1	3.4	1.9	1.9	1.9	1.9	1.2	1.7	1.6	1.6	1.5	1.8	1.7	1.7
Australia	1.4	1.4	1.6	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4
Belgium	1.3	1.1	2.3	1.1	1.3	1.2	1.2	0.8	1.2	1.1	1.1	0.8	1.2	1.2	1.1
Switzerland	1.2	1.7	4.0	1.5	1.3	1.4	1.4	1.2	1.2	1.3	1.3	1.2	1.2	1.2	1.2
Sweden	0.9	0.9	1.6	0.8	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.7	0.9	0.9	0.8
Austria	0.8	0.7	0.9	0.7	0.8	0.8	0.8	0.6	0.8	0.7	0.7	0.6	0.7	0.7	0.7
Norway	0.8	0.7	1.8	0.7	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.6	0.7	0.7	0.7
Ireland	0.7	0.8	0.0	0.7	0.7	0.7	0.7	0.4	0.6	0.6	0.6	0.5	0.6	0.6	0.6
Denmark	0.7	0.6	1.2	0.6	0.7	0.7	0.7	0.5	0.7	0.6	0.6	0.5	0.6	0.6	0.6
EMDCs 3/	42.4	49.8	23.3	50.2	44.7	45.3	45.8	50.8	44.8	45.5	46.1	50.1	44.6	45.3	45.8
Africa	4.4	3.7	1.6	3.6	4.3	4.3	4.3	3.7	4.4	4.3	4.3	3.4	4.3	4.3	4.2
South Africa	0.6	0.5	0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6
Nigeria	0.5	0.7	0.0	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6
Asia	16.0	24.2	11.7	25.4	18.9	19.7	20.3	25.6	19.0	19.8	20.4	26.1	19.1	20.0	20.6
China 4/	6.4	12.6	6.5	13.3	8.6	9.2	9.6	13.7	8.7	9.3	9.8	14.3	8.8	9.5	10.1
India	2.7	3.1	1.7	3.4	2.9	3.0	3.0	3.5	3.0	3.0	3.1	3.8	3.1	3.1	3.2
Korea, Republic of	1.8	2.0	2.4	2.2	1.9	1.9	2.0	2.3	1.9	2.0	2.0	2.0	1.9	1.9	1.9
Indonesia	1.0	1.3	0.0	1.4	1.1	1.1	1.1	1.4	1.1	1.1	1.2	1.5	1.1	1.2	1.2
Singapore	0.8	1.3	0.4	1.2	0.9	1.0	1.0	0.7	0.8	0.7	0.7	0.9	0.8	0.8	0.8
Malaysia	0.8	0.8	0.2	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Thailand	0.7	1.0	0.3	0.9	0.7	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.7	0.7	0.7
Middle East, Malta and Turkey	6.7	7.2	3.9	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.3	6.6	6.5	6.5
Saudi Arabia	2.1	1.7	2.3	1.5	1.9	1.8	1.8	1.5	1.9	1.9	1.8	1.3	1.8	1.8	1.7
Turkey	1.0	1.2	0.3	1.2	1.0	1.0	1.1	1.2	1.0	1.1	1.1	1.2	1.0	1.1	1.1
Iran, I.R. of	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.7	0.7	0.7
Western Hemisphere	7.9	7.4	3.5	7.6	7.7	7.7	7.6	7.8	7.8	7.7	7.7	7.8	7.8	7.7	7.7
Brazil	2.3	2.3	1.7	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.6	2.4	2.4	2.4
Mexico	1.9	1.7	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Venezuela, R.B. de	0.8	0.6	0.0	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7
Argentina	0.7	0.6	0.0	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Transition economies	7.2	7.3	2.5	7.0	7.1	7.0	7.0	7.0	7.1	7.0	7.0	6.5	6.9	6.8	6.8
Russia	2.7	2.6	1.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.6
Poland	0.9	0.9	0.7	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:															
EU-28	30.4	27.0	39.4	26.0	29.1	28.7	28.4	24.8	28.7	28.2	27.8	23.8	28.4	27.8	27.4
LICs 5/	3.3	2.3	0.6	2.2	3.2	3.1	3.1	2.3	3.2	3.1	3.1	2.1	3.2	3.1	3.1
Updated 14th Review Poorest 6/	1.7	1.1	0.2	1.0	1.7	1.7	1.8	1.1	1.7	1.8	1.8	1.0	1.7	1.7	1.7

Source: Finance Department.

1/ All simulations show distributions based on the quota formula (i.e., selective increases) plus ad hoc increases where needed to protect the shares of the poorest members and with 5 percent of the overall increase allocated as ad hoc increases based on voluntary financial contributions.

2/ Voluntary financial contributions are based on VFCS II, which is the weighted average of contribution shares, with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined, and 0.2 for capacity development. See Annex IX for details.

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

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

5/ Currently PRGT-eligible countries.

6/ Updated 14th Review list to include countries that are PRGT-eligible and meet the FY 2017 IDA per capita GNI cut-off of US\$1,185 (data through 2015) and twice that amount for small states, as defined by the IMF. Currently includes 37 member countries.

Maximum changes in quota shares

42. The 14th Review included limits on maximum changes in quota shares in both directions. Maximum declines in quota shares were limited to 30 percent or 0.85 percentage points, and maximum nominal increases were limited to 220 percent, which translated into a maximum quota share increase of 60 percent, given the overall quota increase of 100 percent under the 14th Review.

43. Whether including any such limits in the 15th Review would be helpful in achieving a broad consensus would need to be considered in light of the other elements. As illustrated in Table 10, the specific limits applied in the 14th Review would not have been binding in the simulations considered in this paper for a 50 percent overall increase but would have affected a small number of members with a 75 percent increase and between 6 and 18 members with a 100 percent increase.

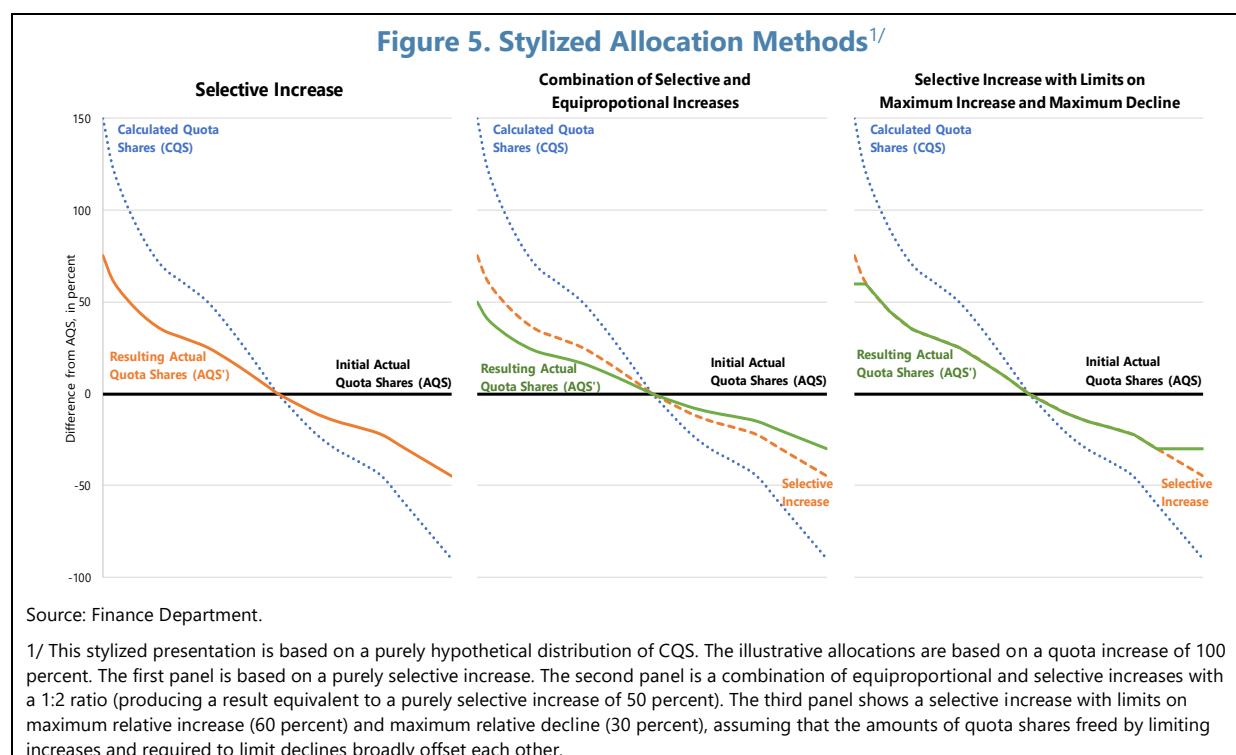
Table 10. Illustrative Allocations – Maximum Changes in Quota Shares^{1/}
(In percent)

	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			
	50%	75%	100%	50%	75%	100%	50%	75%	100%	
<i>Absolute change (in pp)</i>										
Selective Increase	Maximum increase	2.28	2.93	3.42	2.41	3.10	3.62	2.58	3.32	3.88
	Maximum decline	-0.79	-1.01	-1.18	-0.63	-0.81	-0.94	-0.40	-0.52	-0.60
<i>Relative change (in percent)</i>										
Selective Increase	Maximum increase	44%	57%	66%	48%	62%	72%	40%	52%	61%
	Maximum decline	-26%	-34%	-39%	-27%	-34%	-40%	-28%	-36%	-42%
	Number of members with decline greater than 30%	0	2	6	0	3	10	0	7	15
<i>Absolute change (in pp)</i>										
Selective Increase with Ad Hoc Element based on VFCS II (5 percent)	Maximum increase	2.17	2.79	3.25	2.29	2.94	3.43	2.45	3.15	3.68
	Maximum decline	-0.95	-1.22	-1.43	-0.80	-1.03	-1.20	-0.29	-0.38	-0.44
<i>Relative change (in percent)</i>										
Selective Increase with Ad Hoc Element based on VFCS II (5 percent)	Maximum increase	41%	53%	62%	45%	58%	67%	38%	49%	58%
	Maximum decline	-26%	-34%	-39%	-27%	-34%	-40%	-28%	-36%	-42%
	Number of members with decline greater than 30%	0	2	8	0	3	10	0	8	18

Source: Finance Department.

1/ Cells shaded in gray reflect maximum declines greater than the limits used in the 14th Review (0.85 pp or 30 percent) or maximum increase greater than the limit implied by the 14th Review (60 percent). The 14th Review limits for a maximum absolute decline (0.85 pp) and a maximum relative increase (60 percent) would affect at most one member.

44. The possible “need” for limits on maximum changes is more likely to arise when the overall adjustment in shares is relatively large. If an equiproportional element is included, the distribution of gains and losses in quota shares will already be dampened, which could reduce the case for introducing additional limits. In this regard, such limits can act as an alternative approach, which is specifically targeted at capping the largest increases or declines while still preserving a more sizable degree of adjustment in shares across the bulk of the membership. In contrast, with an equiproportional element, the shift in shares is dampened in both directions across the full range of the membership. Figure 5 provides a stylized illustration of these two different approaches.



Correcting “anomalies”

45. The inclusion of ad hoc elements can lead to some “anomalies” that may need to be corrected through additional ad hoc adjustments. Ad hoc increases for a sub-set of members have the effect of reducing the share of the overall increase available for other members. For members with current AQS and CQS very close to each other and that do not benefit from the ad hoc elements, this reduction may result in a loss of quota share for some under-represented members, or in some over-represented members falling below their calculated quota shares. The extent and size of such possible “anomalies” vary according to the specification of the ad hoc element, though they typically only affect a relatively small number of members.³⁵

46. In the 14th Review, these “anomalies” were addressed through the design of the ad hoc element. Over-represented members were protected from falling below their CQS (or the compressed GDP blend). For under-represented members, the gains from the selective increase were at least preserved in the ad hoc round, guaranteeing that their resulting actual quota shares would be above their initial AQS.

³⁵ In the selective increases with protection of the poorest, the number of members affected by these anomalies ranges from one to four, depending on the formula used, and the relative distance from the “natural floor” (AQS for under-represented or CQS for over-represented) is at most 0.4 percent of the floor. The inclusion of a VFCS-based ad hoc increase has a larger impact: up to 14 members are affected, with maximum distortions close to 3 percent of the “floor.”

SUMMARY AND ISSUES FOR DISCUSSION

47. This paper seeks to provide background for a further discussion on the 15th Review.

Building on staff's earlier work and in response to Directors' feedback at two meetings of the CoW in September 2017, the paper presents additional work on the adequacy and composition of Fund resources, on selected issues related to the quota formula, and on issues related to the distribution of quotas. Recognizing that these issues are closely interlinked and will ultimately need to be agreed as a package, the paper presents a limited set of purely illustrative simulations to show how the distribution of actual quota shares may vary, depending on the size of the overall quota increase, the agreed quota formula, and the specific approaches used in distributing the quota increase.

48. No proposals are presented at this stage, pending further Board guidance on possible approaches to narrowing the current differences of views. The paper discusses approaches that have in the past facilitated reaching an agreement on quota adjustments, and illustrates the impact that some of these approaches could have in the current context. Based on Directors' guidance, staff will undertake further work in line with the Executive Board's agreed work plan for the 15th Review.

49. Directors may wish to comment on the following issues:

- Do Directors agree that the updated two-pillar framework provides a useful basis for further discussions on the adequacy and composition of the Fund's resources?
- Do Directors agree that the Fund's traditional model of relying primarily on its permanent quota resources, supplemented by standing borrowing arrangements, has served the membership well over several decades?
- In light of the additional analysis presented in this paper, do Directors have preliminary views on the size of the Fund's permanent resources that would allow it to continue to play its central role in the GFSN through at least the middle of the next decade?
- Are there other possible reforms of the quota formula beyond those considered to date that staff should explore to help narrow remaining differences of views?
- What are Directors' views on the possible approaches to realigning quota shares, and what do they see as the most promising areas for further work? What types of allocation mechanisms, or other elements that have a bearing on the distribution of quota increases, should be explored?
- Do Directors have any further views on how to define the list of the poorest members (discussed in Annex VIII) that would be eligible for protection under the 15th Review? What are Directors' views on extending protection also to small developing states?
- What are Directors' views on whether, and if so how, to recognize voluntary financial contributions in the context of the 15th Review?



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FIFTEENTH GENERAL REVIEW OF QUOTAS—FURTHER CONSIDERATIONS—ANNEXES

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Annex I. Additional Information on Global Economic and Financial Metrics and Related Resource Adequacy Indicators

1. Compared with the [2017 Paper](#) on resource adequacy, the updated metrics-based analysis considers also a new reference level for assessing Fund resource needs.¹ As requested by a few Directors, in addition to the simple average of previous quota ratios to economic indicators used as reference levels in the 2017 paper, staff assessed the impact of a weighted average of these ratios, giving greater weight to recent quota increases.² The reference period is 2015-19 considering the 2019 deadline for completion of the 15th Review. Results are based on data from the October 2017 WEO database.³ For this paper, the complementary analysis of quota resources needed to restore Fund resources is based on quotas and the NAB only. This responds to many Directors' remarks not to pre-suppose future discussions on the possible renewal of the BBAs.

2. In general, substantial increases in quotas would be required to restore ratios in line with the two reference levels. (Tables 1, 2a and 2b, Figure 1):

- **GDP.** The ratio of quotas to global GDP, a key indicator used in previous general quota reviews, is projected to decline by 2019 to close to the 13th Review levels (before the GFC). Restoring this ratio to the two reference levels—one based on the traditional simple average and the other based on the weighted average—in the period 2015-19 would require a quota increase of about 50 percent (Table 1, upper panel). A doubling of quotas would be required if instead of global GDP, the EMDCs' GDP is used in the analysis. Higher quota increases of about 80-100 percent would also be needed to restore the larger resource envelope of current quota plus NAB resources to global GDP (Table 1, lower panel).⁴
- **Trade and capital flows.** The decline in Fund quotas relative to global current payments and capital inflows to EMDCs is much steeper than relative to GDP, as past quota increases have not restored these ratios to reference levels. Restoring quotas to these indicators is relevant as an economy's potential financing needs are not captured by GDP alone, especially given higher economic and financial interconnectedness and financial deepening. Quota increases of about 75-135 percent are required to restore quotas relative to these indicators, depending on the

¹ The use of an outdated WEO BPM6 database generated errors in some of the traditional metrics analysis presented in the Adequacy of Fund Resources papers issued in March 2016 and August 2017. The corrected data do not affect the GDP-based metrics but lower the other measures, without altering the earlier papers' overall conclusions.

² Specifically, the paper uses a weighted average of the ratios at the time of the last four general quota reviews with quota increases (8th, 9th, 11th, and 14th Reviews). Weights are increasing over time, calculated as the inverse of the number of years since the quota review took place (normalized).

³ The numbers for August 2017 were revised with data from the April 2017 WEO to correct data errors for external variables generated by the use of the WEO BPM6 database.

⁴ The weighted average of reference ratios is higher than their simple average used in the 2017 paper as the 14th Review restored quotas relative to global GDP to 1.3 percent, slightly above the 1.2 percent in previous quota reviews.

reference level used (Table 1, upper panel).⁵ Higher quota increases between about 115-175 percent are needed to restore quota and NAB resources relative to these external variables (Table 1, lower panel).

- Past borrowers' external financing needs (EFN).** Restoring quotas relative to projected EFN require much steeper quota increases than suggested by GDP. A more than doubling of quotas is required to restore the ratio of quotas-to-EFN under the most conservative reference level (Table 1, upper panel). Almost a trebling of quotas would be needed to restore quota and NAB resources relative to EFN (Table 1, lower panel).

Table 1. Quota Increases Required to Restore Fund Resources^{1/}
(Reference Period 2015-19)

A. Quota Increase Required to Restore Quotas Relative to Economic Indicators

Reference Ratios	Additional quotas required (in SDR billion)			Percent increase from current quotas		
	Revised Aug-17	Dec-17	Dec-17	Revised Aug-17	Dec-17	Dec-17
	Simple Avg. 2/	Simple Avg. 2/	Weighted Avg. 3/	Simple Avg. 2/	Simple Avg. 2/	Weighted Avg. 3/
GDP	222	229	251	47	48	53
Current Payments 4/	551	569	436	116	119	91
Capital Inflows to EMDCs 4/	635	640	355	133	134	74
EFN 4/	636	696	596	133	146	125
Average	511	533	410	107	112	86
Memorandum Items:						
GDP EMDCs		814	775		171	162
GDP EMDCs Excl. China		442	447		93	94

B. Quota Increase Required to Restore Quota and NAB Relative to Economic Indicators

Reference Ratios	Additional quotas required (in SDR billion)		Percent increase from current quotas	
	Dec-17	Dec-17	Dec-17	Dec-17
	Simple Avg. 2/	Weighted Avg. 3/	Simple Avg. 2/	Weighted Avg. 3/
GDP	388	462	81	97
Current Payments	784	673	164	141
Capital Inflows to EMDCs	846	545	177	114
EFN	985	901	206	189
Average	751	645	157	135

Source: IMF and WEO published databases (April 2017 and October 2017).

1/ Quotas needed to restore quota ratios to the reference ratios in upper panel. The lower panel presents quotas needed to maintain the envelope of quotas and NAB resources to the reference ratios. **Figures in the lower panel are not comparable with the 2017 paper as the resource envelope now excludes BBAs.**

2/ Traditional reference ratio used in the 2017 paper, which is the simple average of ratios at the last general quota reviews with quota increases (8th, 9th, 11th and 14th Reviews).

3/ Weighted average of the 8th, 9th, 11th and 14th review ratios, with weights determined as the inverse of the number of years since the review (normalized). Thus, it gives larger weights to more recent reviews (weights of 0.11, 0.14, 0.20, and 0.55, respectively).

4/ Figures for August 2017 and December 2017 are based on April 2017 and October 2017 WEO published databases, respectively.

⁵ The weighted average of ratios to current payments and capital inflows to EMDCs are lower than the simple average ratios used in the 2017 paper, given that the rapid increase in these variables over the last two decades has reduced the most recent ratios sharply. Thus, quota increases needed to restore quotas to these ratios are lower.

Figure 1. Fund Resources Relative to Economic Indicators^{1/ 2/}

(In percent)



Source: WEO database and IMF staff calculations.

1/ The reference ratios for quotas and for quotas and the NAB are the simple average ratios at the last four General Reviews with quota increase (8th, 9th, 11th and 14th).

2/ Fund resources are defined as quotas and NAB only, and thus exclude the BBAs, unlike in the 2017 paper.

Table 2a. Size of Quotas and Economic Indicators
(In billions of SDRs unless otherwise indicated)

	Eighth Review 1983 1/	Ninth Review 1990 1/	Tenth Review 1995 1/	Eleventh Review 1998 1/	Twelfth Review 2003 1/	Thirteenth Review 2008 1/	Fourteenth Review 2010 1/	Current Revised Aug-17*	Current Dec-17	Projected Revised Aug-17*	Projected Dec-17
Size of Quota Increase, in Percent	47.5	50.0	0.0	45.0	0.0	0.0	100.0	n.a.	n.a.	n.a.	n.a.
1 Agreed Quotas 2/ 3/	90.0	135.2	146.1	212.0	213.7	217.6	477.0	477.0	477.0	477.0	477.0
2. Economic indicators and applicable data periods	<u>1976-80</u>	<u>1981-85</u>	<u>1986-90</u>	<u>1990-94</u>	<u>1995-99</u>	<u>2001-05</u>	<u>2004-08</u>	<u>2012-16</u>	<u>2012-16</u>	<u>2015-2019</u>	<u>2015-2019</u>
a. GDP	7,588	11,083	15,744	17,884	22,442	29,912	35,906	51,554	51,612	56,478	57,419
b. Current payments 4/	1,341	2,168	2,852	3,700	5,785	8,026	12,112	17,653	17,670	18,181	18,498
c. Capital inflows to EMDCs 5/	50	46	49	173	233	373	689	757	748	666	669
d. EFN 6/			200	269	450	552	963	2,074	2,123	1,734	1,828
3. Ratio of Quota resources to economic indicators (in percent)											
a. GDP	1.2	1.2	0.9	1.2	1.0	0.7	1.3	0.9	0.9	0.8	0.8
b. Current payments 4/	6.7	6.2	5.1	5.7	3.7	2.7	3.9	2.7	2.7	2.6	2.6
c. Capital inflows to EMDCs 5/	181.4	293.9	299.0	122.9	91.8	58.4	69.3	63.0	63.8	71.6	71.3
d. EFN 6/	n.a.	n.a.	73.1	78.8	47.5	39.4	49.5	23.0	22.5	27.5	26.1
4. Additional Quota resources needed to restore relative size of Fund at the time of past quota increases (in billions of SDR)											
<i>Based on data through 2016</i>											
a. GDP	135	153	2	135	14	-	209	1	-	-	-
b. Current payments 4/	709	625	428	536	176	2	219	0	-	-	-
c. Capital inflows to EMDCs 5/	879	1,720	1,759	442	209	-	41	-	-	-	-
d. EFN 6/	n.a.	n.a.	1,074	1,197	531	360	575	11	-	-	-

Source: Finance Department.

1/ Year in which the quota review was completed, i.e., when the Board of Governors' Resolution on quota increases was approved. The 10th Review did not provide for an increase in quotas, and the increase in actual quotas relative to the 9th Review is due to the increase in the number of members.

2/ Column for 12th Review includes China's ad hoc quota increase of SDR 1.682 billion in 2002.

3/ Column for 13th Review includes ad hoc quota increases for China, Mexico, Korea, and Turkey of SDR 3.809 billion in 2006.

4/ Defined as the average of the sum of payments on goods, services, income and current transfers. Figures for August 2017 and December 2017 are based on April 2017 and October 2017 WEO published databases, respectively.

5/ Defined as the average of the sum of inflows of direct, portfolio and other investment. Figures for August 2017 and December 2017 are based on April 2017 and October 2017 WEO published databases, respectively.

6/ Figures for August 2017 and December 2017 are based on April 2017 and October 2017 WEO published databases, respectively.

Table 2b. Size of Quotas + NAB and Economic Indicators
(In billions of SDRs unless otherwise indicated)

	Eighth Review 1983 1/	Ninth Review 1990 1/	Tenth Review 1995 1/	Eleventh Review 1998 1/	Twelfth Review 2003 1/	Thirteenth Review 2008 1/	Fourteenth Review 2010 1/	Current Revised Aug-17*	Current Dec-17	Projected Revised Aug-17*	Projected Dec-17
Size of Quota Increase, in Percent	47.5	50.0	0.0	45.0	0.0	0.0	100.0	n.a.	n.a.	n.a.	n.a.
1 Agreed Quotas + NAB 2/ 3/ 4/	108.5	153.7	164.6	246.0	247.7	251.6	659.4	659.4	659.4	659.4	659.4
2. Economic indicators and applicable data periods	<u>1976-80</u>	<u>1981-85</u>	<u>1986-90</u>	<u>1990-94</u>	<u>1995-99</u>	<u>2001-05</u>	<u>2004-08</u>	<u>2012-16</u>	<u>2012-16</u>	<u>2015-2019</u>	<u>2015-2019</u>
a. GDP	7,588	11,083	15,744	17,884	22,442	29,912	35,906	51,554	51,612	56,478	57,419
b. Current payments 5/	1,341	2,168	2,852	3,700	5,785	8,026	12,112	17,653	17,670	18,181	18,498
c. Capital inflows to EMDCs 6/	50	46	49	173	233	373	689	757	748	666	669
d. EFN 7/			200	269	450	552	963	2,074	2,123	1,734	1,828
3. Ratio of Quota resources to economic indicators (in percent)											
a. GDP	1.4	1.4	1.0	1.4	1.1	0.8	1.8	1.3	1.3	1.2	1.1
b. Current payments 5/	8.1	7.1	5.8	6.6	4.3	3.1	5.4	3.7	3.7	3.6	3.6
c. Capital inflows to EMDCs 6/	218.7	334.1	336.9	142.6	106.4	67.5	95.7	87.1	88.2	98.9	98.6
d. EFN 7/	n.a.	n.a.	82.3	91.5	55.0	45.6	68.5	31.8	31.1	38.0	36.1
4. Additional Quota resources needed to restore relative size of Fund at the time of past quota increases (in billions of SDR)											
<i>Based on data through 2016</i>											
a. GDP	79	56	-	51	-	-	288	1	-	-	-
b. Current payments 5/	770	593	360	516	97	-	303	1	-	-	-
c. Capital inflows to EMDCs 6/	976	1,839	1,859	407	136	-	56	-	-	-	-
d. EFN 7/	n.a.	n.a.	1,088	1,283	509	308	795	16	-	-	-

Source: Finance Department.

1/ Year in which the quota review was completed, i.e., when the Board of Governors' Resolution on quota increases was approved. The 10th Review did not provide for an increase in quotas, and the increase in actual quotas relative to the 9th Review is due to the increase in the number of members.

2/ Column for 12th Review includes China's ad hoc quota increase of SDR 1.682 billion in 2002.

3/ Column for 13th Review includes ad hoc quota increases for China, Mexico, Korea, and Turkey of SDR 3.809 billion in 2006.

4/ Include the GAB, the NAB, the 2009/10 Borrowing Agreements, 2012 Borrowing Agreements, and 2016 Borrowing Agreements.

5/ Defined as the average of the sum of payments on goods, services, income and current transfers. Figures for August 2017 and December 2017 are based on April 2017 and October 2017 WEO published databases, respectively.

6/ Defined as the average of the sum of inflows of direct, portfolio and other investment. Figures for August 2017 and December 2017 are based on April 2017 and October 2017 WEO published databases, respectively.

7/ Figures for August 2017 and December 2017 are based on April 2017 and October 2017 WEO published databases, respectively.

Annex II. Access-based Scenarios: Estimating the Demand for Fund Resources Through 2025

1. This Annex provides details on the various approaches used in the access-based scenarios.

The following applies to all approaches:

- **Horizon.** The potential calls for Fund financing are based on projections for 2025 from the Fall 2017 WEO baseline going through 2022 and simple staff extrapolations for 2023-25.¹
- **Fund lending capacity.** The Fund's lending capacity is assessed as of 2025 and is assumed to comprise current quotas plus NAB (SDR 463 billion), assuming the renewal of the NAB for its current amount in SDR terms, beyond end-2022. This responds to many Directors' remarks not to pre-suppose future discussions on the possible renewal of the BBAs.²
- **Color coding.** The results table follows the same color coding as in the 2017 paper: scenarios covered by quota alone are in dark green, scenarios covered by quota and NAB are in light green, and scenarios that are not covered do not have a color.
- **Program sizes.** Program sizes of 4 to 8 percent of GDP are presented as in the 2017 paper.³

Approach A—Past Top Borrowers Seeking Assistance During the Last Five Crises

2. **Set of scenarios.** These scenarios look at a potential crisis involving nine, six, or three countries of the past top borrowers seeking Fund financing at the same time. The top borrowers are selected from the list of all members that had a Fund GRA arrangement or requested outright disbursements since 1990, ranked by their 2025 GDP. With several past top borrowers having vulnerabilities, future crises could entail calls for Fund financing from at least the top three past borrowers, in contrast to the two top borrowers that received Fund financing during the GFC.

3. **Results.** Table 1 indicates that Fund resources based on quotas and the NAB do not even cover all scenarios where just the top three past borrowers avail themselves of Fund financing, and

¹ WEO forecasts for GDP and SDR/USD exchange rate until 2022. The GDP forecast is extended to 2025 assuming the same growth rate from 2021-2022. The SDR/USD exchange rate is extended assuming a constant exchange rate from 2022-2025.

² The lending capacity would be lower, assuming a buffer of SDR 50 billion to prevent the Fund's lending capacity from declining to a point that can undermine confidence in the Fund's ability to support its members. A buffer of SDR 50 billion would be about half of the revealed preference of Directors for a SDR 100 billion quota buffer, as implied in the activation thresholds for the NAB and bilateral borrowing. The 2010 paper ([Fourteenth General Review of Quotas—The Size of the Fund—Initial Considerations](#), 3/15/10) used a similar approach though with the assumption that only two-thirds of quotas would be utilized before borrowing is activated. Applying this approach would double the size of the buffer to SDR 106 billion.

³ The average program size based on historical crises is about 6 percent of GDP.

would not cover any scenario with the top six borrowers. Even fewer scenarios are covered if a minimal quota buffer of SDR 50 billion is factored in.

Table 1. Potential Calls on Fund Financing Under Approach A^{1/}
(In SDR billions)

Arrangement Size^{3/}
as Percent of Member's 2025 GDP

Top Borrowers^{2/}	4	5	6	7	8
a. Top 9	556	695	833	972	1,111
b. Top 6	465	582	698	814	931
c. Top 3	295	369	443	517	590

Source: Staff estimates based on the October 2017 WEO and financial data.

1/ Cells in dark green flag scenarios that can be covered by the Fund's quota resources; in light green, using current quota and NAB resources.

2/ The top borrowers are the largest members in terms of GDP that have had an arrangement since 1990. The size of the arrangement is a percentage the member's forecasted 2025 GDP.

3/ See Table 2 in the 2017 paper for a comparison with historical arrangement sizes.

Approach B— Panel Logit Scenarios

4. Set of scenarios. These scenarios update the results of the econometric model on potential calls on Fund financing under a global volatility shock scenario.⁴ Similarly to the 2017 paper, a global shock is triggered when the VIX index reaches an average level of 30 during the year of the shock. This level is below the average VIX level observed over the period 2008–09. Key differences from the 2017 paper are that the size of potential calls from the flagged countries is based on projected global GDP in 2025 rather than in 2017 and that the lending capacity is based on quota plus the NAB rather than quotas, the NAB, and BBAs.

5. Results. Table II.2 summarizes potential calls on Fund financing under the different scenarios and assumptions discussed above. Compared to the 2017 paper, the updated scenario shows considerably larger potential demand for Fund financing reflecting mainly the effect of extending the reference period from 2017 to 2025. Only one scenario can be covered with a lending capacity based on quota and NAB resources compared with four scenarios in the 2017 paper.

⁴ For a detailed explanation of the panel logit model see Annex II of [Adequacy of Fund Resources—Further Considerations](#) (7/31/2017).

Table 2. Potential Calls on Fund Financing Under Approach B^{1/2/}
(In SDR billions)

Scenarios ^{4/}	Arrangement Size as Percent of Member's GDP ^{3/}				
	4	5	6	7	8
with current lending capacity					
a. 1:1 Threshold (4.8 percent)	935	1,169	1,403	1,637	1,870
b. 2:1 Threshold (6.4 percent)	760	951	1,141	1,331	1,521
c. 3:1 Threshold (16.1 percent)	439	549	659	769	879

Source: Staff estimates based on data from Finance Department, WEO, IFS, WDI, BIS, Federal Reserve Bank of St Louis, U.S. Energy Information Administration, U.S. Federal Reserve, and the PRS Group.

1/ Cells in dark green indicate scenarios that can be covered by current quota resources; in light green those covered by current quota and NAB resources.

2/ Unlike the 2017 paper, the potential calls from the flagged countries is based on projected global GDP in 2025 rather than in 2017.

3/ See Table 2 and paragraph 17 of the 2017 paper to map these sizes to the historical distribution of arrangement sizes.

4/ These scenarios are based on the results of the logit approach under a global risk scenario where the VIX reaches 30.

Annex III. Global Shock Scenarios: Estimating Potential Calls for Fund Financing

1. This Annex provides details on the refinements to the global scenarios model, compared to the 2017 Paper on resource adequacy. Reflecting feedback during Directors' discussion in September, Section A assumes greater use of international reserves and other financing resources, and Section B considers a longer-term perspective. The general methodology to estimate the potential calls for Fund resources remains unchanged.¹ The Fund's lending capacity is assumed to comprise current quotas plus the NAB only, in response to many Directors' remarks not to pre-suppose future discussions on the possible renewal of the BBAs.

A. Assuming Greater Use of International Reserves and Bilateral Swap Lines

2. In calculating financing sources other than the Fund, the following assumptions were modified from the 2017 paper:

- **Self-Insurance.** The use of reserves has been expanded. In particular, reserves are now assumed to remain above 80 percent of the level suggested by the Fund's ARA metric for EMs, compared to 100 percent of ARA metric in the 2017 paper. In addition, a country can now use reserves subject to the maximum level of 40 percent relative to their initial level, compared to 25 percent in the 2017 paper. This assumption is broadly in line with the average plus one standard deviation of reserve usage for EMs and AMs during the GFC.
- **Bilateral Swap Arrangements.** Countries with active swap agreements with China are included in the analysis.² These countries are assumed to use their swap fully to meet potential financing demand. Beyond these active swap agreements, no additional bilateral borrowing is assumed.

3. The estimated potential calls for Fund resources decline modestly, compared to the baseline results in the 2017 paper. Table 1 and Figure 1A present the results of the simulation with the revised assumptions. The estimated potential calls for Fund resources range from SDR 133 billion to 1,065 billion, subject to pervasiveness and severity of the crisis, compared to a range from SDR 143 billion to SDR 1,391 billion in the 2017 paper.

¹ See the Annex III of [Adequacy of Fund Resources—Further Considerations](#) (7/31/2017) for further details.

² As of end-July 2017, 31 countries and the European Central Bank had active bilateral swap agreements with China, of which 26 countries are included in the country selection sample based on their vulnerability exercises. For further details, see [report](#).

Table 1. Potential Calls on Fund Financing Through 2017-18^{1/}
(In SDR billions)

	Crisis Intensity (percentile)			
	65th	75th	85th	90th
a. Extremely pervasive global systemic crisis	311	474	750	1,065
b. Very pervasive systemic crisis	308	448	654	876
c. Pervasive systemic crisis	268	355	517	692
d. Systemic crisis	133	184	243	288

Source: IMF staff estimates based on data from WEO and the People's Bank of China.

1/ Cells in dark green indicate scenarios that can be covered by current quota resources; in light green those covered by current quota and NAB resources.

B. Assuming a Longer-Term Perspective

4. In line with the methodology to estimate the potential calls for Fund resources in the baseline as described in Section A, the scenarios assume the following:

- **Vulnerable countries, shock intensities, and domestic adjustments are assumed to be the same as in the baseline (Section A).** Vulnerable countries facing BOP shocks in 2024-25—based on four systemic crisis scenarios—are assumed to be the same as identified by the staff's Winter 2017 Vulnerability Exercise. Crisis severities, based on the empirical distribution of financial crisis over the past 30 years using Kernel density distribution, are also assumed to be the same. Moreover, these countries are assumed to have the same level of domestic adjustment at 0.7 percent of GDP per annum over two years.
- **BOP variables used for estimating the demand for financing are assumed to grow in line with nominal GDP.** They include the current account balance, FDI, short-term and medium-term debt amortization and disbursements, deposits (for EMs only), and gross international reserves. Nominal GDP in 2024-25 for each member is extrapolated by assuming the same annual growth rate of nominal GDP as in 2022, taken from the Fall 2017 WEO.
- **The shares of RFAs and bilateral swaps to total demand for financing are assumed to be the same as the levels in the baseline.** This assumption requires financing by RFAs and BSAs to grow on average by almost 60 percent, compared to the baseline.

5. Compared to the baseline scenario, the estimates of potential calls for Fund resources in the middle of the next decade almost double. A larger global economy leads to significantly higher financing needs in 2024-25. Note that the supply for financing also increases. Given that reserves grow in line with GDP as do RFAs and BSAs, countries affected by the crisis will use more reserves and RFA and BSA financing. Reserves usage, on average, accounts for half of the total supply of financing sources. After taking into account the supply from RFAs and BSAs, resulting Fund financing ranges from SDR 231 billion to SDR 1,984 billion, equivalent to an 80 percent increase compared to the baseline (Table 2, Figure 1B).

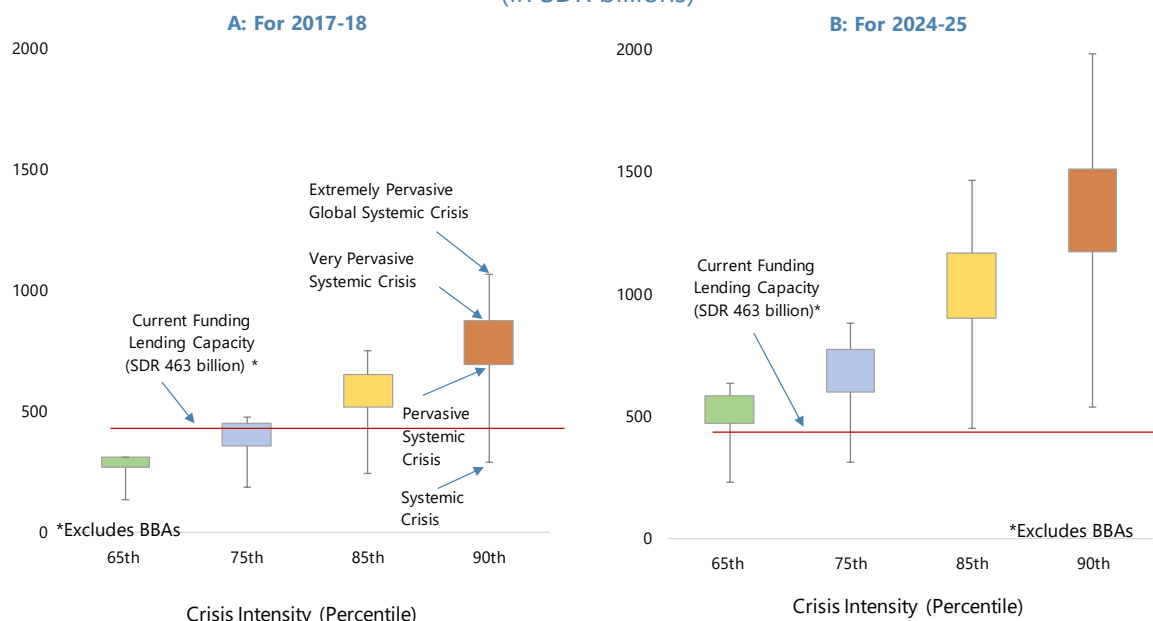
Table 2. Potential Calls on Fund Financing Through 2024-25^{1/}
(In SDR billions)

	Crisis Intensity (percentile)			
	65th	75th	85th	90th
a. Extremely pervasive global systemic crisis	636	878	1,463	1,984
b. Very pervasive systemic crisis	583	774	1,165	1,513
c. Pervasive systemic crisis	470	598	900	1,173
d. Systemic crisis	231	309	450	538

Source: IMF staff estimates based on data from WEO.

^{1/} Cells in dark green indicate scenarios that can be covered by current quota resources; in light green those covered by current quota and NAB resources

Figure 1. Potential Call for Fund Resources
(In SDR billions)



Source: IMF staff calculations.

6. The results are subject to caveats. First, as mentioned in the 2017 paper, the mechanical way of calculating the size of the Fund as a residual between the demand for financing and other non-Fund financing sources does not in any way pre-judge how countries access financing. Second, the set of vulnerable countries could change, as the global environment changes. Third, while the estimates capture the growth of the global economy, they are based on the 2017/18 openness of the world. With the global economy becoming increasingly more interconnected, the share of EMDCs in global trade could rise further and the financial openness gap between EMDCs and AMs could narrow. In particular, if EMs catch up in terms of financial openness to the level of AMs, then financing needs could be substantially larger. Finally, the estimation assumes that the share of RFAs and BSA to total demand for financing will be the same as the one in the baseline scenario.

Annex IV. Long-term Uncertainties

Using scenario planning techniques, staff constructed three hypothetical illustrative scenarios of what the world in 10 years could look like. The three scenarios explore how a hypothetical financial crisis could evolve, and how the GFSN would respond under different assumptions about the role of the fund as well as the future role of technology, power balance, and trust within the international monetary system (IMS).

- 1. Circle of Trust:** Distributed ledger technologies (DLTs) are being increasingly used as a technology that improves the business environment and lowers transactions costs, starting to boost cross-border commerce and facilitating international cooperation. A hacked DLT code makes a commodity trading system collapse in a large commodity exporter, causing a crash in its stock exchange and a sharp decline in exports. Although this is quickly resolved, fears of contagion to other commodity exporters trigger substantial capital outflows. A loss of trust in the integrity of all DLT-based platforms, such as some interbank payments systems and cross-border trade, lead for those countries that are advanced in the technology to a sharp slowdown in economic activity that propagates fast because of high interconnectedness. Some commodity exporters' reserve buffers have continued to decline owing to a prolonged period of low commodity prices and as they have not yet fully diversified their economies. They are not part of sufficiently large RFAs, and the need for adjustment rules out short-term liquidity swap lines. An adequately resourced Fund helps contain the shock. The Fund provides the needed resources to the worst hit countries and extends precautionary credit lines to some others, helping countries cope with the economic slowdown, minimizing spillovers and contagion, and restoring confidence in the global economy.
- 2. Twin Peaks:** Automation is progressing, and trust in political systems—and with it, support for the multilateral system—is eroding. Trade and financial integration has slowed, and countries see the Bretton Woods organizations less as being at the center of the IMS, but rather as one option in the GFSN, along with RFAs and development banks. Following a decade of unsustainable policies (aided by weakening global oversight), a large emerging market experiences severe fiscal stress. Consumption and investment fall, and its financial sector goes into crisis. This spills over to the entire region, given strong trade and financial ties, and ends up affecting global confidence. At the eve of the crisis, the Fund is under-resourced, given countries' increasing focus on regional solutions. Regional bodies are unable to deal with a crisis of this magnitude (both financially and to implement needed conditionality). It takes a year to get a multilateral agreement to provide the Fund with adequate resources, too late to prevent a global recession.
- 3. Tech Race:** Governments and corporations are on the brink of a technological race, and Artificial Intelligence (AI) trading is starting to take off. However, trust in institutions is declining and support for regulation and global cooperation weakening, amid strong pressures to allow innovation to flourish. Some large economies invest heavily into R&D spending to join the tech race. This has increased debt and depleted buffers: while countries strive to achieve a current account surplus, reserves tend to be used up by frequent but small financial crises, stemming from the boom and bust of IT companies. A deep financial crisis is precipitated by a breakdown of

algorithmic trading in an advanced economy: a flaw in the code revealed that AI models have been mispricing the riskiness of some assets. Most of the big financial institutions and corporations are exposed, weakening private sector balance sheets. The uncertainty causes global liquidity to dry up and capital flows out of vulnerable AMs and EMs and into reserve currency economies, causing a crisis. The global financial safety net is weak: the Fund is only one-half its size a decade ago, bilateral swap agreements are difficult to achieve, and RFAs offer only short-term arrangements.

Annex V. Variability and Balance of Payments Difficulties

This Annex responds to a request at the September 1 meeting to examine if there is a link between variability and broader balance of payment difficulties using the latest available data. Previous analysis had explored the relationship between the variability variable used in the quota formula and broader balance of payments difficulties and found essentially no correlation. Following the methodology of previous analyses, balance of payment difficulties are proxied by two sets of measures, based on exchange market pressure and external sector vulnerability indicators. The findings indicate that the correlation between variability and these measures of balance of payments difficulties remains close to zero. In response to another request, this Annex also re-examines the correlation between variability and Fund arrangements using the latest available data and breaking the dataset into different country groups. The findings indicate that the correlation between variability and Fund arrangements is also close to zero.

1. This Annex presents further work on variability in response to requests at the September 1, 2017 meeting of the Committee of the Whole. Specifically, staff was asked to verify the correlation between variability and broader measures of balance of payment difficulties with updated data. Staff was also asked to examine whether the previous findings on the relationship between variability and actual use of Fund resources hold if the dataset is split into Advanced Economies (AEs) and Emerging Market and Developing Economies (EMDCs). This Annex responds to both requests in turn.

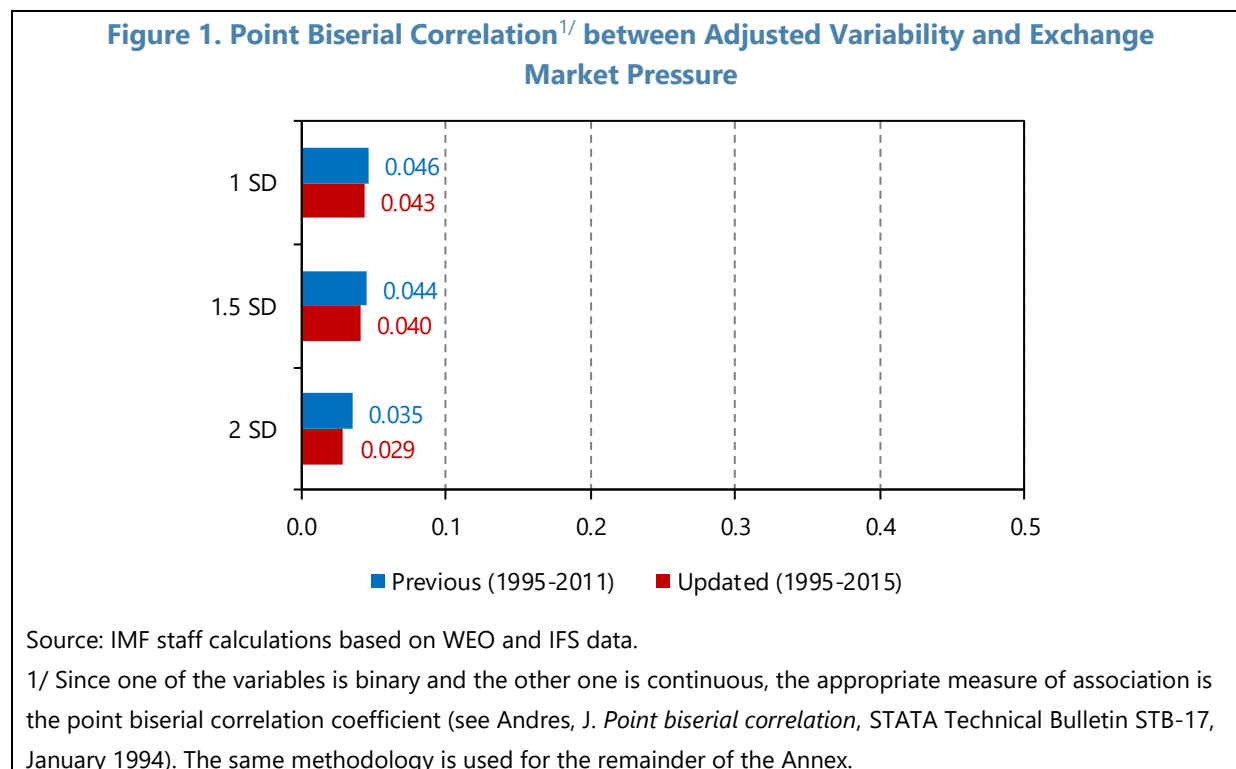
2. As in previous analyses, an index of exchange market pressure (“EMP”) was used as a proxy for balance of payment difficulties.¹ Following several studies, a country is characterized as having an episode of EMP when it experiences a sharp exchange rate depreciation and/or large decline in international reserves.² In the analysis below, the EMP index is calculated as the weighted average of the changes in exchange rates (national currency per US dollar) and the negative of the changes in international reserves using quarterly data from the IMF’s International Financial Statistics database for the period 1995–2015, extending the previous dataset by four years. Following the literature, the weights are set equal to the inverse of the standard deviations of the individual country time series. The EMP index is then transformed into a binary variable using thresholds based on 1, 1.5 and 2 standard deviations from the mean.³ These thresholds are motivated by the focus on balance of payments difficulties rather than currency crises per se which are typically perceived as more severe events.

¹ See Annex IV in [Quota Formula – Data Update and Further Considerations – Annexes](#) (6/6/13).

² For example, see Kaminsky, G., Lizondo, S., Reinhart, C., *Leading Indicators of Currency Crises*, IMF Staff Papers, 45 (1), 1998, pp.1-48 and Sachs, J., Tornell, A., Velasco, A., *Financial Crises in Emerging Markets: The Lessons from 1995*, Brooking Papers on Economic Activity, 1,1996, pp. 147-215.

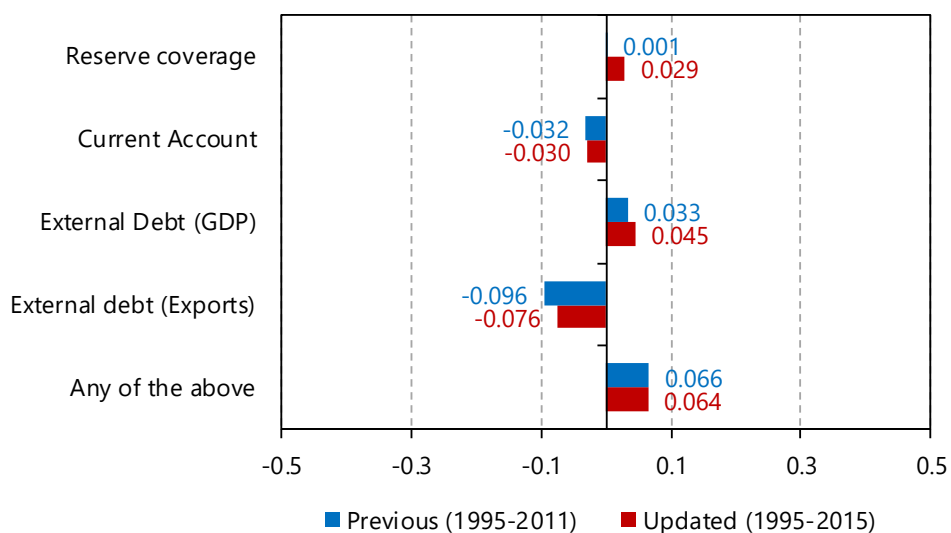
³ To match the variability data, which are available on an annual basis, the EMP binary variables, which are quarterly, are aggregated. The annual EMP variable takes the value of one if at least one of the quarterly observations equals to one.

3. The correlation of variability with balance of payment difficulties, as proxied by the EMP binary variable, remains close to zero with the updated dataset. As in previous work, the original variability variable for each country is adjusted by subtracting the country's share in global GDP to remove the effect of economic size. As shown in Figure 1, the relationship between the adjusted variability variable and balance of payments difficulties measured by the various EMP measures remains very weak with correlations ranging between 0.029 and 0.043 in the updated dataset. Indeed, the relationship appears to be even weaker compared to previous analysis, which found correlations ranging between 0.035 and 0.046.



4. An examination of the correlation between adjusted variability and alternative ways of measuring balance of payments difficulties also shows a very weak relationship. Apart from measuring balance of payments' difficulties with the EMP index above, staff also proxied them by four external sector indicators used in the vulnerability exercise for EMs. These are: 1) reserves in percent of short-term debt at remaining maturity plus current account deficit; 2) current account balance (in percent of GDP); 3) external debt (in percent of GDP); and 4) external debt (in percent of exports). The ratios were converted into binary variables using the thresholds identified in the vulnerability exercise for EMs. Overall, the correlations of the individual vulnerability indicators with the variability measure remain either not significantly different from zero, or negative. An indicator variable which takes the value of 1 if the threshold is breached for any of the four vulnerability indicators does not appear to be correlated with variability either (Figure 2).

Figure 2. Point Bi-serial Correlation between Adjusted Variability and Indicators of External Sector Vulnerability



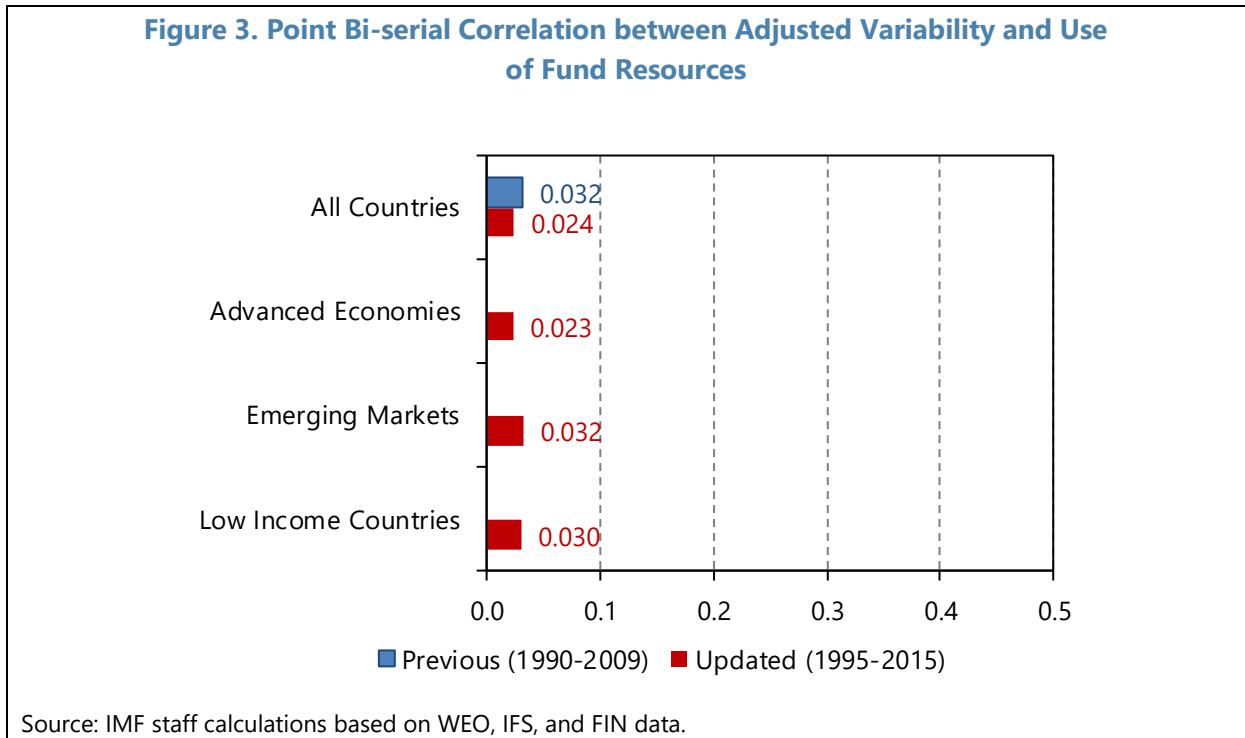
Source: IMF staff calculations based on WEO and IFS data.

5. Staff analysis suggests also that the correlation between adjusted variability and approval of a Fund arrangement is weak, including when the analysis is conducted for different country groups. Following previous analysis,⁴ a binary variable takes on the value of 1 if a Fund arrangement was approved in any given year, and 0 otherwise for the period 1995-2015.⁵ The correlation between the binary variable and that of adjusted variability is 0.024. The fact that it is close to zero and is not statistically significant suggests that the relationship between adjusted variability and the demand for Fund resources is weak. Moreover, the correlation readings do not change considerably and remain close to zero and not statistically significant, when done separately for the three sub-samples of AEs, EMs and LICs. For these country groupings, the correlation between adjusted variability and the use of Fund resources ranges between 0.023 and 0.032 (Figure 3).

6. Overall, the results of the correlation analysis are consistent with earlier staff work that indicates that the current measure of variability does not capture its intended purposes in the formula.

⁴ See Appendix II in *Quota Formula Review – Initial Considerations – Supplementary Appendix* (2/10/12)

⁵ The binary variable was constructed using data covering all facilities (GRA and PRGT), including precautionary arrangements



Annex VI. Convergence between GDP Measured at Market and PPP Exchange Rates

Responding to a request at the September 1st meeting of the Committee of the Whole, this Annex discusses the convergence between GDP measured at market and PPP exchange rates.

1. The 2008 Quota and Voice Reform introduced PPP as part of a GDP blend variable to the quota formula. The blend gives a 60 percent weight to GDP at market prices and a 40 percent weight to GDP at PPP prices. It was argued that “this approach captures the central role of quotas in the Fund’s financial operations, for which GDP at market exchange rates is the most relevant, as well as the Fund’s non-financial activities, where PPP GDP can be viewed as a relevant way to capture the relative volume of goods and services produced by economies.”¹

2. It was agreed that the scope for retaining PPP GDP in the formula would be reviewed after 20 years. The inclusion of PPP GDP and compression in the formula had been one of the most difficult aspects of the deliberations, and the Board decided to include these elements in the formula for a period of 20 years (i.e., until 2028), after which the scope for retaining them would be reviewed “in light of progress toward convergence between market rate and PPP GDP in emerging market and developing countries, and the overall objective of ensuring adequate voice and participation for all members.”²

3. This Annex responds to a request at the September 1st, 2017 meeting of the Committee of the Whole that staff examine whether market and PPP GDP have been converging as anticipated at the time of introduction of the GDP blend variable. Based on the estimated relationship between per capita income and relative price levels and on the GDP growth rates prevailing at that time, it was noted that “about 40 of the most dynamic countries would be expected to converge to 80 percent of the US price level within 20 years.”³ More broadly, the agreement to review in 20 years the scope of retaining PPP in the formula was to take place in light of convergence between market and PPP GDP in EMDCs. This Annex examines to what extent PPP and market GDP have converged since 2008.

¹ See [Report of the Managing Director to the International Monetary and Financial Committee on Reform of Quota and Voice in the International Monetary Fund](#) (4/8/2008).

² *Ibid.*

³ See [Quota and Voice Reform—Key Elements of a Potential Package of Reforms](#) (2/26/2008, footnote 10)

How Much Convergence and How Broad Based?

4. The convergence of GDP evaluated at PPP exchange rates to GDP at market exchange rates (MER) is equivalent to the convergence of PPP exchange rates to market exchange rates (see Box 1).⁴ In turn, as the ratio of PPP exchange rates to market exchange rates (both expressed as national currency units per U.S. dollar) provides a measure of the general price level in a country relative to that in the United States, the convergence of PPP exchange rates to market exchange rates can be cast in terms of the convergence of national price levels to the U.S. price level.

Box 1. WEO Definitions of GDP Valued at Market Rates and PPP Rates

According to the World Economic Outlook, the PPP exchange rate of a country i (domestic currency per PPP U.S. dollars) is defined as:

$$PPPEX_i = \frac{NGDP_i}{PPPGDP_i}$$

where $NGDP$ is the GDP at current market prices in domestic currency and $PPPGDP$ is the GDP valued at current PPP U.S. dollars.

$NGDP$ can be converted to market U.S. dollars by using the definition:

$$NGDP_i = NGDPD_i * ENDA_i,$$

where $NGDPD$ is the GDP at current market prices in U.S. dollars and $ENDA$ is the period average market exchange rate (domestic currency per U.S. dollars).

By replacing $NGDP$ in the first definition and reorganizing, we arrive at the following definition for the ratio of the two GDPs in U.S. dollars (R):

$$R_i = \frac{NGDPD_i}{PPPGDP_i} = \frac{PPPEX_i}{ENDA_i}$$

This implies that the movements in the ratio R are governed by the relative movements of market exchange rates ($\Delta\%ENDA_i$) and PPP exchange rates, that is relative price levels ($\Delta\%PPPEX_i$):

$$\Delta\%R_i \cong \Delta\%PPPEX_i - \Delta\%ENDA_i$$

5. The theoretical literature postulates that relative cross-country price differences are related to differences in real per capita income. Harrod (1933), Balassa (1964) and Samuelson (1964) have argued that if labor is mobile intersectorally but not internationally, productivity in the tradables sector (where prices are determined internationally) determines wages in the nontradables sector and hence the national price level. Based on this line of reasoning, the Harrod-Balassa-Samuelson argument implies that higher productivity growth is associated with higher per capita income growth and, in turn, with higher relative price levels. However, temporary setbacks for this convergence can take place if fluctuations in market exchange rates are significant.

⁴ Note that convergence of PPP- and MER-based GDPs for individual countries comes from the convergence in prices and not real GDP (since the real GDP series embedded in the two series, MER GDP and PPP GDP, are identical). At the same time the Harrod-Balassa-Samuelson proposition implies that price convergence is closely and positively linked to convergence of real GDP per capita; see paragraph 5.

6. Data suggest modest convergence of market and PPP GDP for EMDCs as a whole between 2005 and 2011, with some reversal since then that was mainly due to strengthening of the US dollar (Figure 1). Convergence of real market exchange rates in emerging market economies toward their PPP rates could occur either through relatively higher domestic price inflation in these economies, or through nominal exchange rate appreciation, or (most likely) some combination of both. With regard to domestic price inflation, and drawing on the Harrod-Balassa-Samuelson proposition, the modest convergence until 2011 can be partly explained by the relatively higher per capita GDP growth rates in EMDCs compared to the U.S. and also to AEs as a whole.⁵ The reversal since then, most of which took place from 2014 to 2015, coincided with a notable appreciation of the US dollar (Figure 2): indeed, for all regional subgroupings within EMDCs, the market exchange rate depreciation against the U.S. dollar during this period has significantly offset movements of relative price levels, as measured by PPP exchange rates. Over the whole period, economies in the Western Hemisphere region showed the fastest convergence among EMDCs, followed by Asian EMDCs.

7. The relatively modest pace of price level convergence observed over the past decade is consistent with narrower-than-expected differentials in GDP growth rates. The analysis in 2007 was based on the assumption that real per-capita GDP in all non-US economies would grow on average $2\frac{3}{4}$ pp faster per annum than in the US over the next twenty years.⁶ In fact, the mean growth rate over the period 2005-2015 was only 1.5 pp higher for all non-US economies compared to the US (4.8 pp higher for the fastest growing quartile of EMDCs). Moreover, as mentioned earlier, the sizable depreciation of market exchange rates vis-à-vis the U.S. dollar in EMDCs in recent years added to the slow convergence in PPP and MER GDP levels for the period under review.

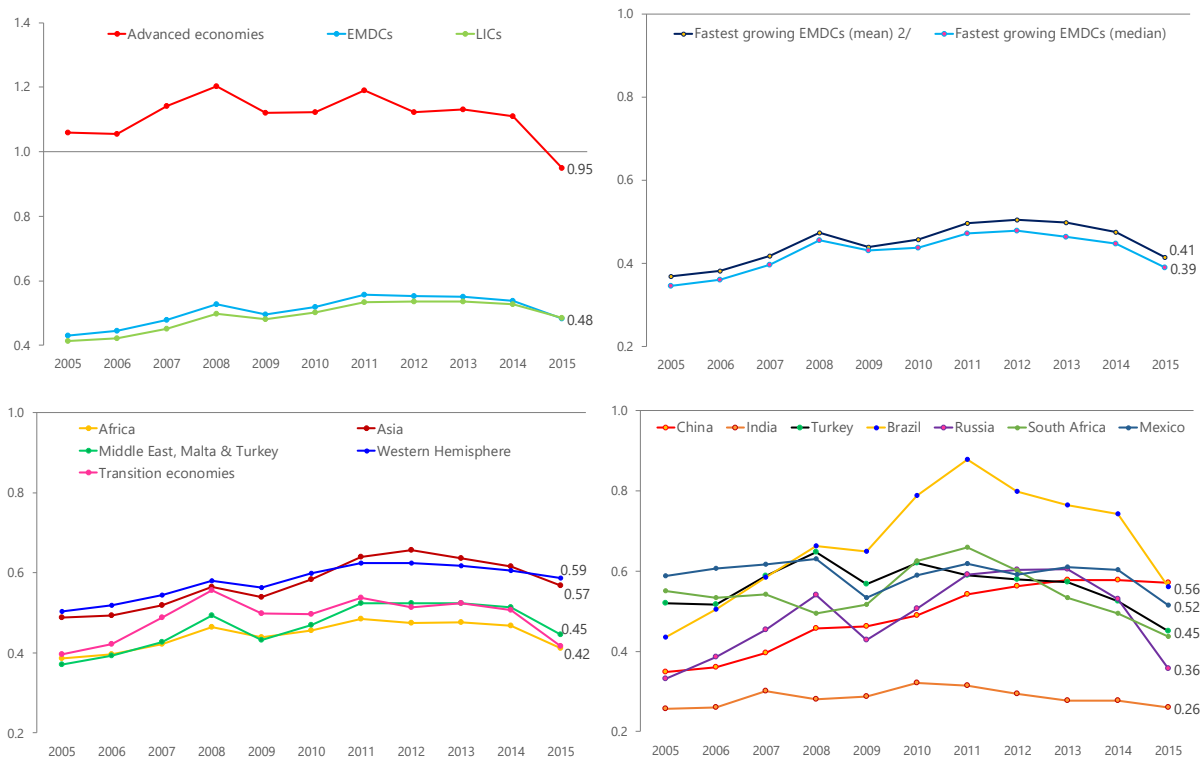
8. For EMDCs, convergence in 2005-2015 has been more broad-based compared to the previous decade. Table 1 shows that the number of EMDCs exhibiting convergence increased from 78 to 114 over the two decades 1995-2005 and 2005-2015. However, the overall rate of convergence during the latter period was modest: the data shows that the average price level for the whole EMDCs group converged from 43 percent of the US price level in 2005 to only 48 percent of the US price level by 2015.⁷ Nevertheless, this is faster than during the previous decade when the average price level for EMDCs remained broadly unchanged relative to the US price level.

⁵ From 2005 to 2011 real GDP per capita of EMDCs grew at an average rate of 3.1 percent, well above the per capita growth of the U.S. (0.4 percent) and AEs as a whole (0.2 percent).

⁶ See Appendix IV in *Quota and Voice Issues—Troika Working Group Report to Group of Twenty Deputies* (9/25/07).

⁷ Considering both AEs and EMDCs, the picture of convergence has not changed that much: while in 2005, 34 countries had already converged to at least 80 percent of the U.S. price level, by 2015, this number dropped to 30 (mostly due to the impact of the global financial crisis on some European countries).

Figure 1. Convergence of PPP and MER GDP Levels^{1/}
(MER-to-PPP GDP ratios)

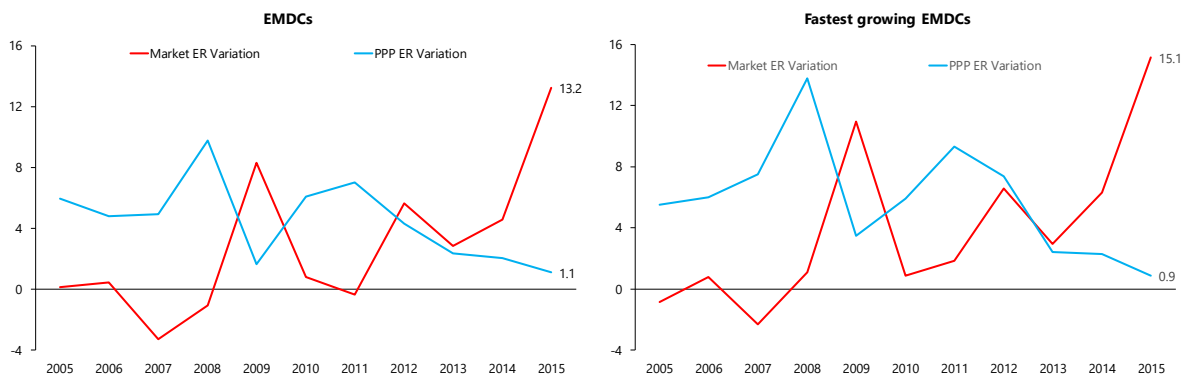


Source: IMF staff calculations based on WEO data.

1/ Simple average of individual country ratios between MER GDP and PPP GDP.

2/ Countries in the top quartile of average GDP per capita growth rates over the period 2005-2015.

Figure 2. Exchange Rate Variations Against the U.S. Dollar^{1/}
(in percent)



Source: IMF staff calculations based on WEO data.

1/ Simple average of individual country appreciation/depreciation rates. A positive value represents a depreciation of domestic currencies against the U.S. dollar.

Table 1. Change in MER-to-PPP GDP Ratios

	EMDCs		Converging EMDCs		Diverging EMDCs	
	1995-2005	2005-2015	1995-2005	2005-2015	1995-2005	2005-2015
Initial ratio	0.43	0.43	0.36	0.39	0.50	0.53
Final ratio	0.43	0.48	0.44	0.49	0.41	0.47
Average change	0.00	0.05	0.08	0.10	-0.09	-0.06
Median change	0.00	0.04	0.07	0.08	-0.06	-0.06
No. of countries ^{1/}	152	160	78	114	74	46

Source: IMF staff calculations based on WEO annual data.
1/ Countries with available PPP data.

9. Based on current trends, price convergence of EMDCs toward the US level appears likely to proceed only slowly. If market exchange rates were to be constant and relative price movements were to follow the trend shown over the past decade, by 2025 EMDCs would be expected to converge to a mean of 54 percent of the US price level (compared to a mean of 43 percent at the time of the 2008 Reform).

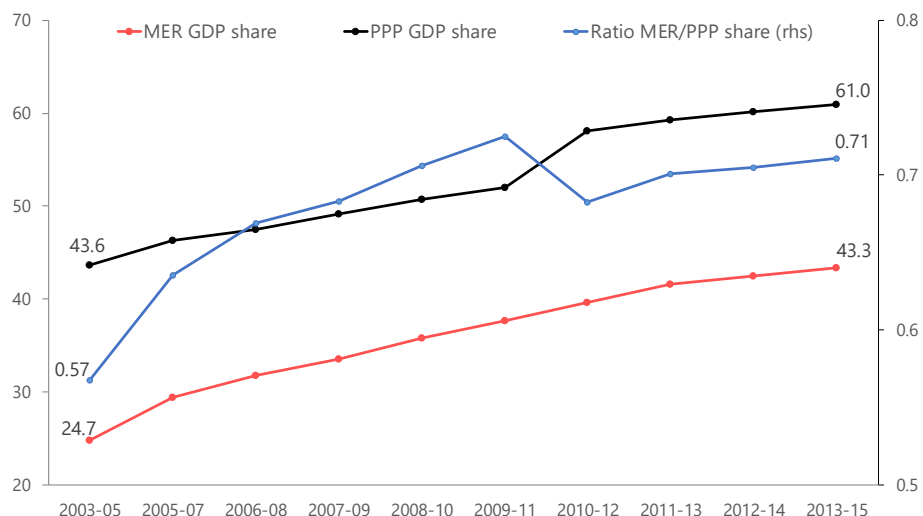
Implications for Calculated Quota Shares

10. While convergence between market and PPP price levels has been modest, the ratio of MER to PPP GDP shares for EMDCs as a whole has converged more markedly (Figure 3). Based on the data used in the quota formula, the ratio of MER to PPP GDP share (in global GDP) for EMDCs as a whole increased from 0.57 in 2005 to 0.71 percent in 2015 (i.e., from the 2008 quota data set to the 2017 quota data set). Given the modest convergence in price levels, the fact that, between 2005 and 2015, the GDP of EMDCs grew at an average rate that exceeded that of AEs by 2.9 percentage points has been the main driver for this result.⁸ This has translated into a slightly declining average boost in the GDP blend share of EMDCs due to the inclusion of PPP GDP,⁹ from 4.7 basis points in 2005 to 4.3 basis points in 2015.

⁸ As EMDCs' share in global MER GDP is smaller than their share in PPP GDP, the ratio of their MER to PPP GDP shares would increase in the absence of any convergence of their MER and PPP exchange rates, even if the growth rates of their PPP and market GDP are identical, but higher than those of the AEs as a whole. (For the sake of illustration, assuming an initial MER GDP share of 10 percent, PPP GDP share of 20 percent and corresponding MER to PPP GDP ratio of 0.5, and a uniform 100 increase in both PPP and MER GDP levels, would yield a new MER PPP share of 18.2 percent and a PPP share of 33.3 percent and corresponding MER to PPP GDP ratio of 0.55). Indeed, the difference in the size of the initial shares of EMDCs' MER and PPP GDP, and the fact that their GDP (both PPP and MER GDP) have grown faster than that of AEs, account for the bulk of the increase in the ratio of MER to PPP GDP share for EMDCs as a whole over 2005-2015.

⁹ Calculated as the average of differences between individual countries shares in the current GDP blend and their shares in MER GDP.

Figure 3. EMDCs: MER GDP and PPP GDP Shares, 2005-2015^{1/}
(in percent)



Source: IMF staff calculations based on data from quota data updates in 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, and 2017.

^{1/} The Figure includes one structural break due to the switch in the 2014 data update to the 2011 ICP estimates (data for 2010-2012).

11. The results are subject to some caveats. For the purposes of assessing convergence, the sample period is relatively short since PPP GDP was introduced into the formula, covering only about a decade. Moreover, and especially over such limited time frames, price level convergence is sensitive to market exchange rate fluctuations, as illustrated by the impact of the notable appreciation of the US dollar from 2014 to 2015. More time will be needed to provide a fuller assessment of MER and PPP GDP convergence.

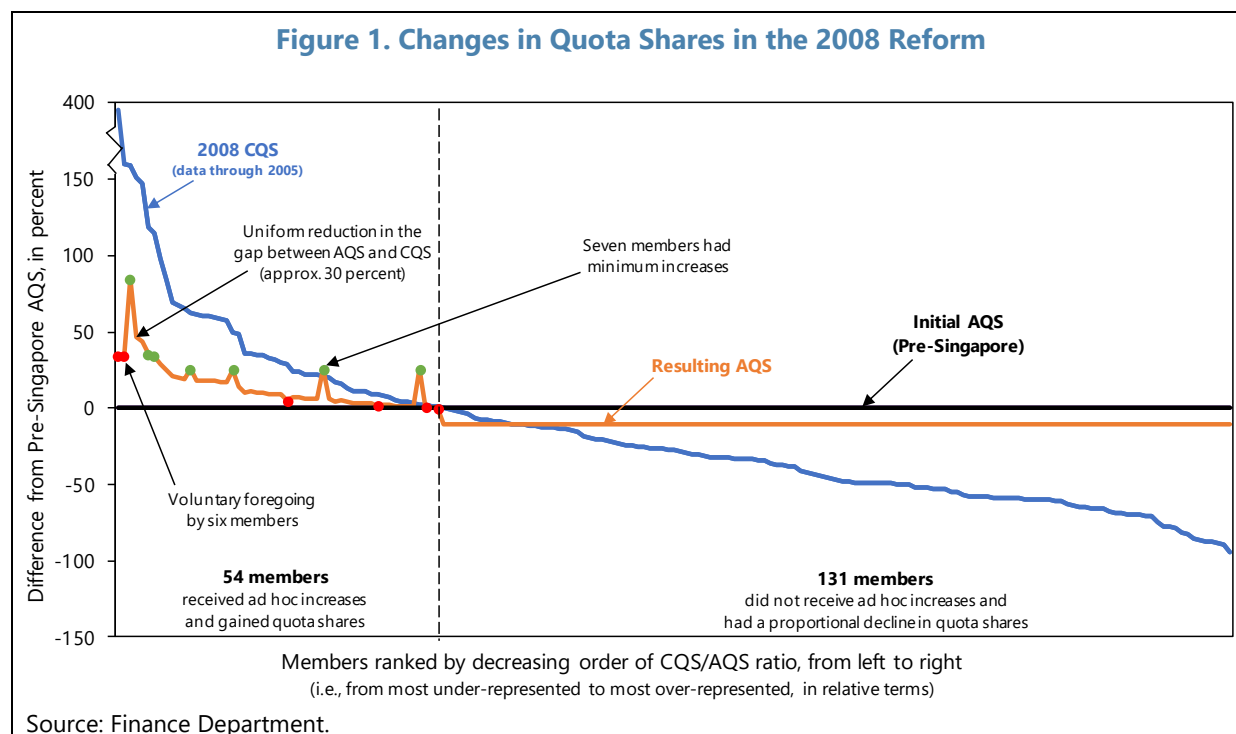
Annex VII. Realignment of Shares in Recent Quota Reforms

This Annex presents a description of the mechanisms used to distribute quota increases in the last two major quota reforms: the Quota and Voice Reform (“2008 Reform”) and the 14th Review.

A. Quota Increases in the 2008 Reform¹

1. **The 2008 Reform comprised two rounds of increases.** The first round of increases, in 2006, resulted in a total quota increase of 1.8 percent. The second round raised quotas by a further 9.6 percent. The overall increase in the two rounds was 11.5 percent. Figure 1 illustrates the relative changes in quota shares after the two rounds.
2. **In the first round, agreed in 2006, quota increases were allocated to four members (China, Korea, Mexico, and Turkey) that were substantially underrepresented.** These members were under-represented according to the existing five-formula system and each of the four variables broadly considered by the Executive Board as appropriate for inclusion in a new quota formula. The quota increase reduced the gap between the AQS (as prevailing before the 2006 Annual Meetings in Singapore, or “Pre-Singapore”) and the CQS (based on the five formulas) by one third.
3. **In the second round, agreed in 2008, quota increases were allocated to 54 members who were under-represented based on the new quota formula.** The gap between the “Pre-Singapore” AQS and CQS (based on the new formula) was reduced by the same uniform factor (of almost 30 percent) for all members eligible for an increase. For example, if the gap between AQS and CQS for an eligible member was 1 percentage point, that member would have an increase in its quota share of close to 0.3 percentage points. After the two rounds, members who were not eligible for an increase had a relative decline in quota shares of 10.3 percent.
4. **As part of the final agreement, the following elements were also adopted:**
 - *Foregoing:* Several under-represented advanced countries agreed to forego part of the quota increases that they were eligible for, to contribute to the broader reform. Ireland and Luxembourg agreed to a maximum nominal increase of 50 percent; Germany, Italy, Japan, and the United States agreed to have a smaller uniform reduction factor (less than 20 percent).
 - *Booster:* Three under-represented EMDCs that had shares in global PPP GDP substantially larger than their initial quota shares (by more than 75 percent) received a minimum nominal quota increase of 40 percent (Brazil, India, and Vietnam).
 - *Minimum increase:* The four countries that received the first round quota increase in 2006 were assured to receive in 2008 at least a minimum nominal quota increase of 15 percent.

¹ See [Report of the Managing Director to the International Monetary and Financial Committee on IMF Quota and Voice Reform](#) (4/8/08) and [Report of the Managing Director to the International Monetary and Financial Committee on IMF Quota and Voice Reform](#) (9/14/06).



B. Quota Increases in the 14th Review²

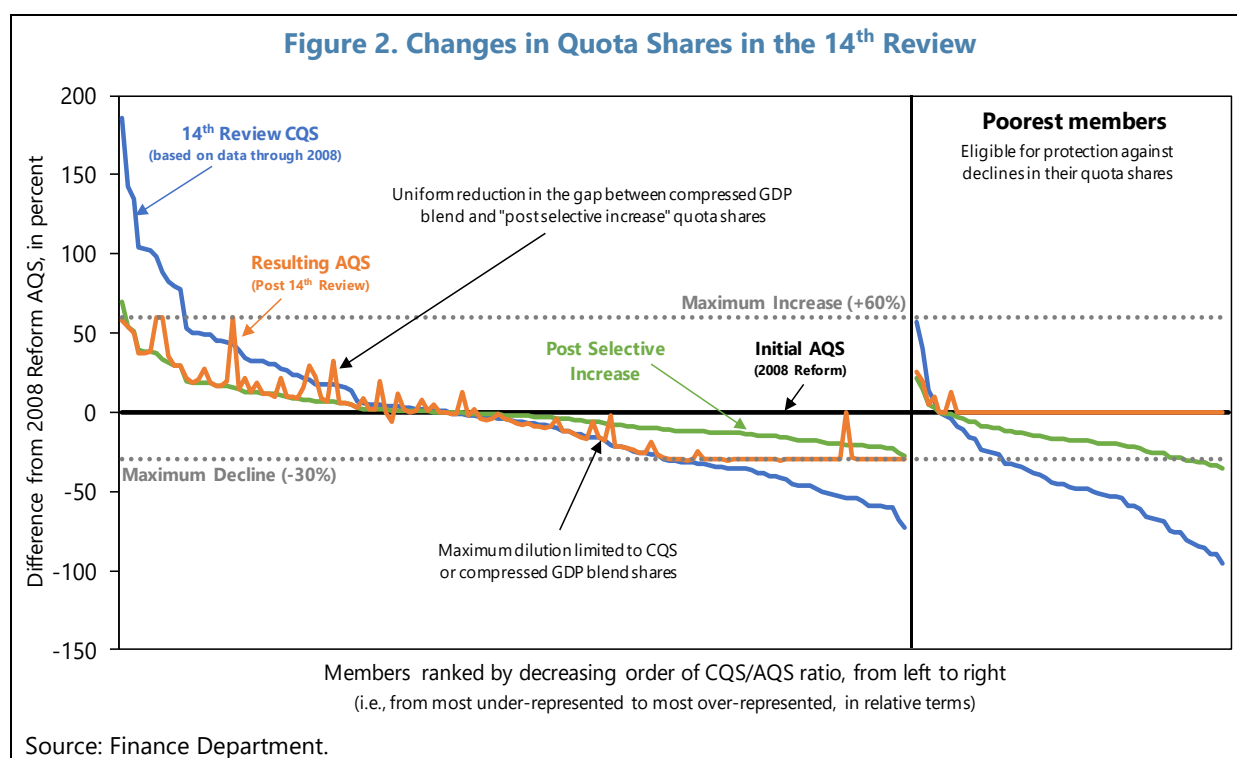
5. Compared with the 2008 Reform, the quota increase under the 14th Review, agreed in 2010, was much larger (100 percent) and involved a more complex allocation method. The increase was split into two main blocks: i) a formula-based selective increase (60 percent) and ii) an ad hoc increase to account for several non-formula considerations (40 percent). Figure 2 illustrates the resulting relative changes in quota shares.

6. The ad hoc increase was allocated mainly using a uniform proportional reduction mechanism. This was based on the gap between members' quota shares after the selective increase and their shares in the GDP blend variable (with a compression factor of 0.95). Advanced economies received half of the reduction factor applied to EMDCs, resulting in reduction factors of 27 and 54 percent, respectively.

² See [IMF Quota and Governance Reform—Elements of an Agreement](#) (10/31/10).

7. The ad hoc increase also included the following elements:

- The poorest countries were individually protected against a decline in their quota share.
- No member's nominal quota was increased by more than 220 percent (given the 100 percent total increase, this meant that no member's AQS increased by more than 60 percent).
- No member's AQS declined by more than 30 percent or by more than 0.85 percentage points.
- Members that were ineligible for the uniform reduction received some protections: i) those that were under-represented under the formula at least preserved the gain in quota shares from the selective increase, and ii) those that were over-represented under the formula were protected against falling below either their compressed GDP blend share or CQS, whichever was higher.
- The final distribution also included a voluntary foregoing by advanced economies to support the overall allocation and voluntary transfers between members.



Annex VIII. Protection of the Poorest and Smallest Members

The Board of Governors Resolution No. 66-2 on the 14th Review stated that steps shall be taken to protect the voice and representation of the poorest members under the 15th Review. The commitment to protect the voice and representation of the poorest members was reiterated in the Executive Board's report on the outcome of the 2013 Quota Formula Review and subsequent guidance by the IMFC and the Board of Governors.¹ At the Committee of the Whole (CoW) Meeting on September 1, 2017 Directors expressed continued commitment to protect the quota and voting share of poorest members under the 15th Review. Views varied on the precise definition of the poor countries to be protected, and many Directors called for protection also for small member states. Building on staff's earlier work, this Annex updates possible alternative lists of members that could qualify for protection, presents an additional list that would include also small developing states, and shows illustrative results of alternative lists and implications for the "cost of protection."

- 1. In the 14th Review, the definition of the poorest Fund members was based on PRGT-eligibility and per capita GNI.** Specifically, the poorest members were defined as PRGT-eligible countries with annual per capita GNI below the prevailing operational IDA cut-off in 2008 (US\$1,135) or below twice the IDA's cut-off for countries meeting the definition of a "small country" under the PRGT eligibility criteria. The countries covered included 52 members plus Zimbabwe, which was not PRGT-eligible at the time due to arrears. South Sudan, which subsequently joined the Fund, also met this criterion and was protected through the 14th Review quota increase in its membership resolution. The combined post-14th Review quota share² for these 54 countries is 3.3 percent.
- 2. Other options for defining the poorest members were also discussed at the time.** These included the full list of PRGT-eligible countries, as well as the list of LICs as defined in the IBRD's World Development Indicators with an annual per capita GNI of US\$975 or less. However, the definition described in the previous paragraph was the preferred approach. It was also decided that protection should be provided through ad hoc quota increases at the individual country level for the eligible countries in the group rather than for the group as a whole.
- 3. The August 2017 paper discussed options for defining the poorest members of the Fund.**³ These included (i) the definition used in the 14th Review, based on PRGT-eligibility and per capita GNI, but applying the updated FY 2017 IDA per capita GNI threshold of US\$1,185; (ii) the list

¹ See, e.g., the *Board of Governors Resolution No. 72-1 on the Fifteenth General Review of Quotas* (12/5/16); [Communiqué of the Thirty-Fifth Meeting of the IMFC](#), April 22, 2017, Washington, D.C.; and [Communiqué of the Thirty-Sixth Meeting of the IMFC](#), October 14, 2017, Washington, D.C.

² Post-14th Review quota shares are calculated assuming that all members have paid for quota increases under the 14th Review. As of December 18, 2017, only eight members had not paid for their quota increases. Marshall Islands, Palau, and Papua New Guinea had consented to, but not yet paid for their quota increases. Eritrea, Micronesia, Somalia, Sudan, and Syria had not consented to their quota increases under the 14th Review. Somalia and Sudan are currently not eligible to consent to their quota increases under the 11th and 14th General Reviews due to protracted arrears to the Fund in the General Resources Account.

³ See [Fifteenth General Review of Quotas—Quota Formula and Realigning Shares—Annexes](#) (8/3/17).

of all currently PRGT-eligible countries; (iii) the United Nations list of least developed countries (LDCs); and (iv) the WEO's list of Low Income Developing Countries (LIDCs).

4. Table 1 presents the lists of poorest Fund members based on the definitions discussed in the August 2017 paper. The lists are unchanged, except for the WEO LIDC list, which was updated in August 2017. In 2014, LIDCs had been defined as countries that (i) were designated PRGT-eligible in the 2013 PRGT eligibility review, and (ii) had a level of per capita GNI less than the PRGT income graduation threshold for non-small states (that is, twice the IDA operational threshold, or US\$2,390 in 2011 as measured by the World Bank's Atlas method), and also Zimbabwe. In 2017 the per-capita GNI threshold was raised to US\$2,700, after adjusting for median growth in GNI per capita among the original LIDC grouping of some 12 percent during 2011-16. Bolivia and Mongolia were thereby dropped from the LIDC grouping as they had 2016 GNI per capita that exceeded the income threshold level (by 14 percent and 31 percent, respectively). At the same time, Timor-Leste was added to the group, reflecting a significant fall in income levels (partly a consequence of large declines in oil prices). The current LIDC list includes 59 countries, all with a GNI per capita of less than US\$2,700, and with a combined AQS of 4.0 percent.

5. This Annex also presents the impact of protecting small developing states in addition to the poorest members. The IMF defines small states as developing countries that are Fund members with populations below 1.5 million.⁴ The Fund currently has 34 members that are small states. Among these, five members are PRGT-eligible and meet the IDA per capita GNI threshold, 15 members are PRGT-eligible but do not meet the IDA threshold, and 14 members are not PRGT-eligible. In line with a definition requested by many Directors at the September 1 CoW meeting, Table 1 presents an alternative list of protected members comprising PRGT-eligible countries and small developing states, including 84 member countries with a combined AQS of 3.6 percent. For the sake of comparison, a list comprising members that meet the updated 14th Review criteria and the small states would comprise 66 members with a combined AQS of 2.1 percent.

6. In all cases, the cost of protection is estimated to be relatively small. The cost of protection is calculated as the share of the total quota increase allotted for protection under various scenarios outlined in the main paper, and varies from 0.8 to 1.6 percent (see Table 2)

7. To illustrate the impact of adopting a broader definition of poorest members, additional simulations of quota increases are presented. Table 3 shows the results of selective increases with the same specifications as in the main paper (analogous to Table 6), but considering the widest definition of protected members: PRGT-eligible plus small developing states (84 members).

⁴ See [2017 Staff Guidance Note on the Fund's Engagement with Small Developing States](#) (12/12/17).

Table 1. Alternative Lists of Poorest Member Countries Qualifying for Protection

Country 1/	PRGT-eligible countries 2/	14 th Review List 3/	Updated IDA Cut-off List 4/	United Nations List	WEO LIDC List	PRGT-eligible plus small developing states
1 Afghanistan	x	x	x	x	x	x
2 Angola				x		
3 Antigua and Barbuda						x
4 Bahamas, The						x
5 Bangladesh	x	x		x	x	x
6 Barbados						x
7 Belize						x
8 Benin	x	x	x	x	x	x
9 Bhutan	x	x		x	x	x
10 Bolivia						
11 Burkina Faso	x	x	x	x	x	x
12 Burundi	x	x	x	x	x	x
13 Cabo Verde	x					x
14 Cambodia	x	x	x	x	x	x
15 Cameroon	x				x	x
16 Central African Rep.		x	x	x	x	x
17 Chad	x	x	x	x	x	x
18 Comoros	x	x	x	x	x	x
19 Congo, Dem. Rep. of	x	x	x	x	x	x
20 Congo, Rep. of	x				x	x
21 Côte d'Ivoire	x	x			x	x
22 Djibouti	x	x	x	x	x	x
23 Dominica	x					x
24 Eritrea	x	x	x	x	x	x
25 Ethiopia	x	x	x	x	x	x
26 Fiji						x
27 Gambia, The	x	x	x	x	x	x
28 Ghana	x	x			x	x
29 Grenada	x					x
30 Guinea	x	x	x	x	x	x
31 Guinea-Bissau	x	x	x	x	x	x
32 Guyana	x	x				x
33 Haiti	x	x	x	x	x	x
34 Honduras	x				x	x
35 Kenya	x	x			x	x
36 Kiribati	x	x		x	x	x
37 Kyrgyz Republic	x	x	x		x	x
38 Lao P.D.R.	x	x		x	x	x
39 Lesotho	x	x		x	x	x
40 Liberia	x	x	x	x	x	x
41 Madagascar	x	x	x	x	x	x
42 Malawi	x	x	x	x	x	x
43 Maldives	x					x
44 Mali	x	x	x	x	x	x
45 Marshall Islands	x					x
46 Mauritania	x	x		x	x	x
47 Mauritius						x
48 Micronesia	x					x
49 Moldova	x				x	x
50 Mongolia						
51 Montenegro						x
52 Mozambique	x	x	x	x	x	x
53 Myanmar	x	x	x	x	x	x
54 Nauru						x
55 Nepal	x	x	x	x	x	x
56 Nicaragua	x	x			x	x
57 Niger	x	x	x	x	x	x
58 Nigeria					x	
59 Palau						x
60 Papua New Guinea	x	x			x	x
61 Rwanda	x	x	x	x	x	x
62 Samoa	x					x
63 São Tomé and Príncipe	x	x	x	x	x	x
64 Senegal	x	x	x	x	x	x
65 Seychelles						x

**Table 1. Alternative Lists of Poorest Member Countries Qualifying for Protection
(concluded)**

Country 1/	PRGT eligible countries 2/	14 th Review List 3/	Updated IDA Cut-off List 4/	United Nations List	WEO LIDC List	PRGT-eligible plus small developing states
66 Sierra Leone	x	x	x	x	x	x
67 Solomon Islands	x	x	x	x	x	x
68 Somalia	x	x		x	x	x
69 South Sudan	x	x	x	x	x	x
70 St. Kitts and Nevis						x
71 St. Lucia	x					x
72 St. Vincent and the Grenadines	x					x
73 Sudan	x	x		x	x	x
74 Suriname						x
75 Swaziland						x
76 Tajikistan	x	x			x	x
77 Tanzania	x	x	x	x	x	x
78 Timor-Leste	x		x	x	x	x
79 Togo	x	x	x	x	x	x
80 Tonga	x					x
81 Trinidad and Tobago						x
82 Tuvalu	x			x		x
83 Uganda	x	x	x	x	x	x
84 Uzbekistan	x	x			x	x
85 Vanuatu	x			x		x
86 Vietnam		x			x	
87 Yemen	x	x	x	x	x	x
88 Zambia	x	x		x	x	x
89 Zimbabwe	x	x	x		x	x
Number of members	70	54	37	47	59	84
Combined AQS of members in the list (percent)	3.3	3.3	1.7	2.4	4.0	3.6
Combined CQS of members in the list, based on the current formula and data through 2015 (percent)	2.3	2.5	1.1	1.8	3.3	2.5
Number of eligible countries for which AQS > CQS	57	44	30	36	46	69

1/ Small developing states, as defined by the IMF, are highlighted in bold.

2/ Effective May 31, 2017.

3/ Countries that were PRGT-eligible and met the IDA per capita GNI cut-off of US\$1,135 in 2008 (or twice that amount for small states, as defined by the IMF), plus Zimbabwe.

4/ Countries that are PRGT-eligible and meet the FY 2017 IDA per capita GNI cut-off of US\$1,185 (data through 2015) and twice that amount for small states, as defined by the IMF.

**Table 2. Cost of Protection – Share of total Quota Increase Allotted for Protection
(In percent)**

Allocation Method	Formula	PRGT-eligible countries	14 th Review List	Updated IDA Cut-off List	United Nations List	WEO LIDC List	PRGT-eligible plus small developing states
Selective Increase	Formula 1.2	1.31	1.26	0.78	0.87	1.26	1.41
	Formula 3.2.c	1.27	1.22	0.75	0.85	1.22	1.37
	Midpoint Set C	1.42	1.35	0.84	0.92	1.37	1.56
Selective Increase with Ad Hoc Element Proportional to VFCS II (5 percent of total increase)	Formula 1.2	1.35	1.31	0.80	0.90	1.31	1.46
	Formula 3.2.c	1.31	1.27	0.78	0.88	1.27	1.42
	Midpoint Set C	1.46	1.40	0.86	0.95	1.41	1.60

Source: Finance Department.

Table 3. Illustrative Allocations – Selective Increase with Protection for the Group of PRGT-eligible Members and Small Developing States^{1/}
(In percent)

	14th Review	Current Formula	Formula 1.2	Overall Increase			Formula 3.2.c	Overall Increase			Midpoint Set C Formula	Overall Increase		
				50%	75%	100%		50%	75%	100%		50%	75%	100%
Advanced economies	57.6	50.2	49.8	54.8	54.0	53.4	49.2	54.6	53.7	53.1	49.9	54.8	54.0	53.4
Major advanced economies	43.4	35.7	36.4	40.9	40.1	39.6	37.7	41.3	40.7	40.3	38.3	41.5	41.0	40.6
United States	17.4	14.5	15.2	16.6	16.3	16.2	15.6	16.7	16.5	16.4	17.4	17.3	17.3	17.3
Japan	6.5	5.1	5.1	6.0	5.9	5.8	5.3	6.0	5.9	5.8	5.3	6.0	5.9	5.8
Germany	5.6	5.0	4.9	5.3	5.3	5.2	5.1	5.4	5.3	5.3	4.7	5.3	5.2	5.1
France	4.2	3.2	3.2	3.9	3.8	3.7	3.4	3.9	3.8	3.8	3.2	3.9	3.8	3.7
United Kingdom	4.2	3.6	3.4	3.9	3.9	3.8	3.6	4.0	3.9	3.9	3.4	3.9	3.8	3.8
Italy	3.2	2.4	2.4	2.9	2.8	2.8	2.5	2.9	2.9	2.8	2.4	2.9	2.8	2.8
Canada	2.3	2.0	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.0	2.2	2.2	2.2
Other advanced economies	14.3	14.5	13.4	13.9	13.8	13.7	11.5	13.3	13.0	12.8	11.5	13.3	13.0	12.8
Spain	2.0	1.8	1.7	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.7	1.9	1.9	1.8
Netherlands	1.8	2.1	1.9	1.8	1.8	1.9	1.2	1.6	1.6	1.5	1.5	1.7	1.7	1.7
Australia	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4
Belgium	1.3	1.1	1.1	1.2	1.2	1.2	0.8	1.1	1.1	1.0	0.8	1.2	1.1	1.1
Switzerland	1.2	1.7	1.5	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Sweden	0.9	0.9	0.8	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.7	0.9	0.8	0.8
Austria	0.8	0.7	0.7	0.8	0.8	0.7	0.6	0.8	0.7	0.7	0.6	0.7	0.7	0.7
Norway	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.7
Ireland	0.7	0.8	0.7	0.7	0.7	0.7	0.4	0.6	0.6	0.6	0.5	0.7	0.6	0.6
Denmark	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.7	0.6	0.6	0.5	0.6	0.6	0.6
EMDCs 2/	42.4	49.8	50.2	45.2	46.0	46.6	50.8	45.4	46.3	46.9	50.1	45.2	46.0	46.6
Africa	4.4	3.7	3.6	4.5	4.5	4.5	3.7	4.5	4.5	4.5	3.4	4.5	4.5	4.5
South Africa	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6
Nigeria	0.5	0.7	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6
Asia	16.0	24.2	25.4	19.1	19.9	20.6	25.6	19.1	20.0	20.7	26.1	19.3	20.2	20.9
China 3/	6.4	12.6	13.3	8.6	9.3	9.8	13.7	8.8	9.5	10.0	14.3	8.9	9.7	10.2
India	2.7	3.1	3.4	3.0	3.0	3.1	3.5	3.0	3.1	3.1	3.8	3.1	3.2	3.2
Korea, Republic of	1.8	2.0	2.2	1.9	1.9	2.0	2.3	1.9	2.0	2.0	2.0	1.8	1.9	1.9
Indonesia	1.0	1.3	1.4	1.1	1.1	1.2	1.4	1.1	1.2	1.2	1.5	1.2	1.2	1.2
Singapore	0.8	1.3	1.2	0.9	1.0	1.0	0.7	0.8	0.7	0.7	0.9	0.8	0.8	0.8
Malaysia	0.8	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
Thailand	0.7	1.0	0.9	0.8	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.7	0.7	0.7
Middle East, Malta and Turkey	6.7	7.2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.3	6.6	6.5	6.5
Saudi Arabia	2.1	1.7	1.5	1.9	1.8	1.8	1.5	1.9	1.8	1.8	1.3	1.8	1.8	1.7
Turkey	1.0	1.2	1.2	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.2	1.1	1.1	1.1
Iran, I.R. of	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Western Hemisphere	7.9	7.4	7.6	7.8	7.8	7.8	7.8	7.9	7.9	7.9	7.8	7.9	7.9	7.9
Brazil	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.6	2.4	2.4	2.4
Mexico	1.9	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Venezuela, R.B. de	0.8	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7
Argentina	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Transition economies	7.2	7.3	7.0	7.1	7.1	7.1	7.0	7.1	7.1	7.1	6.5	7.0	6.9	6.9
Russia	2.7	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Poland	0.9	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Items:														
EU-28	30.4	27.0	26.0	28.8	28.3	28.0	24.8	28.4	27.8	27.4	23.8	28.1	27.4	26.9
LICs 4/	3.3	2.3	2.2	3.4	3.4	3.4	2.3	3.4	3.4	3.4	2.1	3.4	3.4	3.4
Updated 14th Review Poorest 5/	1.7	1.1	1.0	1.7	1.8	1.8	1.1	1.7	1.8	1.8	1.0	1.7	1.8	1.8
PRGT-eligible plus Small States 6/	3.6	2.5	2.4	3.6	3.7	3.7	2.4	3.7	3.7	3.7	2.2	3.6	3.7	3.7

Source: Finance Department.

1/ All simulations show distributions based on the quota formula (i.e., selective increases) plus ad hoc increases where needed to protect the shares of PRGT-eligible members and small developing states.

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

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

4/ Currently PRGT-eligible countries.

5/ Updated 14th Review list to include countries that are PRGT-eligible and meet the FY 2017 IDA per capita GNI cut-off of US\$1,185 (data through 2015) and twice that amount for small states, as defined by the IMF. Currently includes 37 member countries.

6/ Currently PRGT-eligible countries plus small developing states, includes 84 members.

Annex IX. Voluntary Financial Contributions

This Annex updates staff estimates of members' voluntary financial contributions to the Fund. The calculations cover the main forms of voluntary financial contributions. Building on staff's earlier work, it also updates the three alternative forms of aggregating voluntary financial contributions.

Background

1. **This update covers only members' voluntary financial contributions to the Fund.** For example, members' participation in the Financial Transactions Plan is not covered as this is an obligation of members that meet the relevant criteria. Similarly, the estimates include only financial contributions and do not attempt to capture members' in-kind contributions or financing provided by members bilaterally to other members in the context of the Fund's financial arrangements.
2. **As in the past, the voluntary financial contributions considered in this Annex include a broad range of contributions.** They cover Bilateral Borrowing Agreements (BBAs), multilateral support for Fund liquidity in the GRA through the New Arrangements to Borrow (NAB),¹ loan contributions to the PRGT (and its predecessors), subsidy contributions for concessional financing, and capacity development (CD). As discussed below, there are multiple ways of aggregating these different forms of financial contributions.

Update of the Three Aggregate Measures

3. **The Annex updates the three aggregate measures of voluntary financial contributions presented in Supplement 1 of the [August 2017 paper](#).** The main updates relate to the data on the 2016 BBAs, with relatively small updates to the other components. The aggregate measures of voluntary financial contributions are defined as follows:²
 - **VFCS I** – the simple average of member contribution shares to the following five voluntary financial contributions: i) NAB, ii) 2016 BBAs as of end-October 2017,³ iii) PRGT loans, iv) subsidies for concessional financing, and v) CD.
 - **VFCS II** – the same contributions as in VFCS I, but with fixed weights for the main forms of contributions. Specifically, VFCS II is a weighted average of member contributions to the NAB (0.3), 2016 BBAs as of end-October 2017 (0.3), PRGT loans and subsidies for concessional

¹ The GAB is not included in the illustrative aggregate measures of voluntary financial contributions because it does not add to the Fund's overall lending envelope, as outstanding drawings and available commitments under the NAB and the GAB may not exceed the total amount of NAB credit arrangements.

² See Box 1 for more details, and Table

1 for a summary of selected indicators of members' financial contributions to the Fund. Table 2 provides a summary of the distribution across broad country groups of these three aggregate measures of voluntary financial contributions.

³ 2016 BBAs comprise all the 35 creditors under the 2012 BBAs and five new creditors.

financing combined (0.2), and CD (0.2). The higher weight on NAB/bilateral resources reflects to some extent the large magnitude of resources provided compared to contributions to concessional financing and CD.

- **VFCS III** – the same contributions as in VFCS I, but using the greater of the 14th Review quota share or VFCS I share rebased to ensure that total shares add up to 100 percent. This metric recognizes members that have provided financial contributions in excess of their respective quota shares.

Box 1. Components of Voluntary Financial Contributions Shares

Aggregate measures of Voluntary Financial Contributions by member countries comprise five key components:

- All credit arrangements under the New Arrangements to Borrow (NAB) that were effective as of end-September 2017.
- All effective 2016 BBAs and pledges to the 2016 BBAs as of end-October 2017.
- All loan commitments by member countries to the PRG Trust (and its predecessors) cumulative from 1988 to end-September 2017.
- Cumulative subsidy contribution (as of end-September 2017) to various concessional financing initiatives, including:^{1/}
 - the Poverty Reduction and Growth Facility and Exogenous Shocks Facility Trust, or PRGF-ESF Trust (1987);
 - the Trust for Special Poverty Reduction and Growth Operations for the Heavily Indebted Poor Countries and Interim ECF Subsidy Operations, or PRG-HIPC Trust (1999);
 - the Multilateral Debt Relief Initiative, or MDRI, and ESF (2005);
 - the PRGT Subsidy Accounts (2009); and
 - the Catastrophe Containment and Relief Trust, or CCRT (2015); as well as
 - the distribution in 2012/13 of windfall profits from the sale of gold in 2009/10 to the PRGT Subsidy Account.
- Net disbursements for CD over the period FY1999-FY2018Q1.

^{1/} Years refer to start of new fundraising round (in some cases multi-year) approved by the Executive Board.

Table 1. Financial Contributions to the Fund: Selected Indicators
(In percent, unless otherwise indicated)

	14th Review		Share in Financial Contributions to			
	Quota Share	NAB with Rollback 1/	Bilateral Borrowing Agreements 2/	PRGT Loans 3/	Concessional Financing Subsidies 4/	Capacity Development 5/
Advanced Economies	57.6	75.0	66.3	88.6	79.8	84.5
Major advanced economies	43.4	57.9	44.0	67.5	59.7	59.7
United States	17.4	15.6	0.0	0.0	12.3	0.7
Japan	6.5	18.6	13.4	24.6	13.8	35.8
Germany	5.6	7.2	10.8	7.7	6.4	2.8
France	4.2	5.3	8.2	13.8	7.5	1.5
United Kingdom	4.2	5.3	2.9	9.4	9.6	9.9
Italy	3.2	3.8	6.1	7.3	5.0	0.9
Canada	2.3	2.1	2.6	4.8	5.1	8.3
Other advanced economies	14.3	17.1	22.3	21.1	20.1	24.8
Spain	2.0	1.9	3.9	4.4	1.3	0.5
Netherlands	1.8	2.5	3.5	4.1	3.2	4.1
Australia	1.4	1.2	1.4	0.0	1.2	3.7
Belgium	1.3	2.2	2.6	3.0	2.4	1.7
Switzerland	1.2	3.1	1.9	4.5	2.4	8.5
Sweden	0.9	1.3	2.3	1.4	3.0	0.9
Austria	0.8	1.0	1.6	0.0	1.4	0.1
Norway	0.8	1.1	1.9	2.1	1.4	2.3
Ireland	0.7	0.0	0.0	0.0	0.2	0.0
Denmark	0.7	0.9	1.4	1.7	1.4	0.8
Emerging Market and Developing Countries 6/	42.4	25.0	33.7	11.4	20.2	15.5
Africa	4.4	0.2	1.6	0.0	2.5	5.0
South Africa	0.6	0.2	0.4	0.0	0.7	0.0
Nigeria	0.5	0.0	0.0	0.0	0.4	0.0
Asia	16.0	14.0	17.5	8.1	7.7	3.2
China 7/	6.4	8.8	9.6	5.1	2.0	0.4
India	2.7	2.5	2.2	0.0	1.3	1.1
Korea	1.8	1.9	3.4	3.1	1.6	1.4
Indonesia	1.0	0.0	0.0	0.0	0.2	0.0
Malaysia	0.8	0.2	0.2	0.0	0.8	0.0
Singapore	0.8	0.4	0.9	0.0	0.6	0.0
Thailand	0.7	0.2	0.9	0.0	0.4	0.0
Middle East, Malta, and Turkey	6.7	3.3	4.5	1.8	4.2	5.5
Saudi Arabia	2.1	3.1	3.4	1.4	2.6	0.3
Turkey	1.0	0.0	1.1	0.0	0.4	0.0
Iran, Islamic Republic of	0.7	0.0	0.0	0.0	0.3	0.0
Western Hemisphere	7.9	4.3	5.1	1.4	2.9	1.6
Brazil	2.3	2.5	2.2	1.4	0.2	0.2
Mexico	1.9	1.4	2.2	0.0	1.2	0.7
Venezuela, R.B. de	0.8	0.0	0.0	0.0	0.0	0.0
Argentina	0.7	0.0	0.0	0.0	1.0	0.0
Transition economies	7.2	3.2	4.9	0.0	2.9	0.1
Russia	2.7	2.5	2.2	0.0	1.4	0.1
Poland	0.9	0.7	1.6	0.0	0.2	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Memorandum Item:						
EU28	30.4	33.6	47.6	52.7	44.3	24.1
LICs 8/	3.3	0.0	0.0	0.0	0.9	2.8
Total contributions (in millions of SDRs) 9/		180,233	317,965	35,558	7,494	1,356

Source: Finance Department.

1/ All credit arrangements under the NAB that were effective as of end-September 2017.

2/ All effective 2016 BBAs and pledges to the 2016 BBAs as of end-October 2017.

3/ Cumulative loan commitments to the PRGF-ESF Trust as of end-September 2017.

4/ Total bilateral resources received or pledged since 1987 for subsidizing concessional lending, and HIPC, MDRI and CCRT debt relief, as of end-September 2017.

5/ Cash contributions to the IMF for technical assistance and training (excluding in kind contributions), FY1999-FY2018Q1.

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

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

8/ Currently PRGT-eligible countries.

9/ Except for capacity development, which is in millions of US dollars.

Table 2. Financial Contributions to the Fund: Aggregate Measures
(In percent)

	14th Review Quota Share	Calculated Quota Share (CQS)	Various aggregate measures		
			VFCS I 1/	VFCS II 2/	VFCS III 3/
Advanced Economies	57.6	50.2	78.9	76.7	67.8
Major advanced economies	43.4	35.7	57.8	55.7	51.0
United States	17.4	14.5	5.7	5.3	12.8
Japan	6.5	5.1	21.2	21.3	15.6
Germany	5.6	5.0	7.0	7.4	5.1
France	4.2	3.2	7.2	6.9	5.3
United Kingdom	4.2	3.6	7.4	6.3	5.4
Italy	3.2	2.4	4.6	4.5	3.4
Canada	2.3	2.0	4.6	4.1	3.4
Other advanced economies	14.3	14.5	21.1	21.0	16.8
Spain	2.0	1.8	2.4	2.6	1.8
Netherlands	1.8	2.1	3.5	3.4	2.6
Australia	1.4	1.4	1.5	1.6	1.1
Belgium	1.3	1.1	2.4	2.3	1.7
Switzerland	1.2	1.7	4.1	4.0	3.0
Sweden	0.9	0.9	1.8	1.6	1.3
Austria	0.8	0.7	0.8	0.9	0.6
Norway	0.8	0.7	1.8	1.8	1.3
Ireland	0.7	0.8	0.0	0.0	0.5
Denmark	0.7	0.6	1.2	1.2	0.9
Emerging Market and Developing Countries 4/	42.4	49.8	21.1	23.3	32.2
Africa	4.4	3.7	1.8	1.6	3.6
South Africa	0.6	0.5	0.3	0.2	0.5
Nigeria	0.5	0.7	0.1	0.0	0.4
Asia	16.0	24.2	10.1	11.7	12.1
China 5/	6.4	12.6	5.2	6.5	4.7
India	2.7	3.1	1.4	1.7	2.0
Korea	1.8	2.0	2.3	2.4	1.7
Indonesia	1.0	1.3	0.0	0.0	0.7
Malaysia	0.8	0.8	0.2	0.2	0.6
Singapore	0.8	1.3	0.4	0.4	0.6
Thailand	0.7	1.0	0.3	0.3	0.5
Middle East, Malta, and Turkey	6.7	7.2	3.9	3.9	5.3
Saudi Arabia	2.1	1.7	2.1	2.3	1.6
Turkey	1.0	1.2	0.3	0.3	0.7
Iran, Islamic Republic of	0.7	0.7	0.1	0.0	0.5
Western Hemisphere	7.9	7.4	3.1	3.5	5.8
Brazil	2.3	2.3	1.3	1.7	1.7
Mexico	1.9	1.7	1.1	1.3	1.4
Venezuela, R.B. de	0.8	0.6	0.0	0.0	0.6
Argentina	0.7	0.6	0.2	0.0	0.5
Transition economies	7.2	7.3	2.2	2.5	5.3
Russia	2.7	2.6	1.2	1.5	2.0
Poland	0.9	0.9	0.5	0.7	0.6
Total	100.0	100.0	100.0	100.0	100.0
Memorandum Item:					
EU28	30.4	27.0	40.4	39.4	32.3
LICs 6/	3.3	2.3	0.7	0.6	2.5

Source: Finance Department.

1/ Average of contribution shares in NAB, BBAs, PRGT loans, concessional financing subsidies, and capacity development.

2/ Weighted average of contribution shares with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined, and 0.2 for capacity development.

3/ Measure of "generous" contributions which uses the higher of 14th Review quota share or VFCS I share rebased to ensure that total shares add up to 100 percent.

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

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

6/ Currently PRGT-eligible countries.



January 10, 2018

FIFTEENTH GENERAL REVIEW OF QUOTAS—FURTHER CONSIDERATIONS—STATISTICAL APPENDIX

Approved By
Andrew Tweedie

Prepared by the Finance Department.

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DATA DESCRIPTION

This supplement presents by-member data on the illustrative simulations of quota increases presented in the main paper and its Supplement 1, as well as updated data on voluntary financial contributions.

- Table 1 shows detailed results for the simulations presented in Table 6 of the main paper. They comprise selective increases with a small ad hoc element for the protection of the poorest members, based on the updated 14th Review criteria (37 members).
- Table 2 shows detailed results for the simulations presented in Table 9 of the main paper. They comprise selective increases, with the same protection for the poorest members described above, and an ad hoc element (5 percent of the overall increase) distributed in proportion to a measure of members' voluntary financial contributions to the Fund (VFCS II, as defined in the main paper).
- Table 3 shows detailed results for the simulations presented in Table 3 of Annex VIII, Supplement 1. They comprise selective increases with a small ad hoc element for the protection of the poorest members, defined as PRGT-eligible members plus small developing states (84 members).
- Table 4 shows detailed information on different types of voluntary financial contributions and aggregate measures, analogous to Tables 1 and 2 of Annex IX, Supplement 1.

Table 1. Illustrative Allocations – Selective Increase – by Member^{1/}
 (In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula				
			Overall Increase			Overall Increase			Overall Increase				
			50%	75%	100%	50%	75%	100%	50%	75%	100%		
United States	17.398	14.478	15.158	16.612	16.388	16.220	16.630	16.770	16.590	16.455	17.375	17.326	17.314
Japan	6.461	5.100	5.125	6.002	5.871	5.773	5.285	6.056	5.940	5.853	5.300	6.059	5.859
China ^{2/}	6.390	12.581	13.342	8.673	9.325	9.814	13.727	8.801	9.490	10.007	14.260	8.974	10.266
Germany	5.583	4.951	4.929	5.352	5.286	5.237	5.099	5.409	5.360	5.322	4.688	5.272	5.116
France	4.225	3.168	3.230	3.885	3.788	3.715	3.385	3.937	3.854	3.792	3.185	3.870	3.692
United Kingdom	4.225	3.568	3.438	3.954	3.876	3.818	3.606	4.010	3.948	3.902	3.354	3.925	3.775
Italy	3.159	2.399	2.395	2.898	2.824	2.768	2.501	2.933	2.869	2.820	2.403	2.900	2.771
India	2.749	3.113	3.425	2.966	3.028	3.074	3.511	2.994	3.065	3.117	3.804	3.090	3.261
Russia	2.705	2.564	2.572	2.654	2.640	2.629	2.659	2.683	2.677	2.672	2.665	2.684	2.674
Brazil	2.315	2.250	2.328	2.313	2.313	2.312	2.379	2.330	2.335	2.338	2.554	2.388	2.424
Canada	2.311	2.030	2.089	2.231	2.209	2.192	2.187	2.264	2.251	2.241	2.033	2.213	2.164
Saudi Arabia	2.095	1.663	1.473	1.884	1.823	1.778	1.524	1.901	1.845	1.803	1.321	1.833	1.702
Spain	1.999	1.753	1.712	1.899	1.870	1.849	1.791	1.925	1.904	1.888	1.680	1.888	1.832
Mexico	1.868	1.737	1.767	1.830	1.819	1.811	1.836	1.853	1.848	1.845	1.768	1.830	1.811
Netherlands	1.831	2.070	1.901	1.850	1.855	1.859	1.236	1.630	1.572	1.529	1.505	1.718	1.662
Korea, Republic of	1.799	1.989	2.150	1.911	1.943	1.966	2.255	1.945	1.987	2.019	1.972	1.866	1.877
Australia	1.378	1.432	1.461	1.402	1.409	1.414	1.519	1.421	1.433	1.443	1.482	1.408	1.473
Belgium	1.344	1.113	1.052	1.244	1.215	1.194	0.764	1.149	1.093	1.051	0.846	1.176	1.091
Switzerland	1.210	1.723	1.506	1.305	1.332	1.352	1.184	1.198	1.195	1.193	1.153	1.188	1.177
Turkey	0.977	1.161	1.180	1.041	1.060	1.074	1.218	1.054	1.076	1.092	1.224	1.056	1.095
Indonesia	0.974	1.307	1.401	1.113	1.153	1.182	1.437	1.125	1.168	1.200	1.527	1.154	1.244
Sweden	0.929	0.896	0.832	0.894	0.885	0.877	0.814	0.888	0.877	0.868	0.730	0.860	0.826
Poland	0.859	0.921	0.910	0.873	0.877	0.881	0.953	0.888	0.896	0.902	0.842	0.851	0.847
Austria	0.824	0.717	0.679	0.774	0.760	0.749	0.635	0.760	0.741	0.727	0.589	0.744	0.704
Singapore	0.816	1.307	1.203	0.942	0.978	1.005	0.660	0.762	0.747	0.735	0.853	0.826	0.831
Norway	0.787	0.715	0.652	0.740	0.727	0.717	0.685	0.751	0.741	0.734	0.582	0.717	0.697
Venezuela, R.B. de	0.780	0.556	0.565	0.707	0.686	0.671	0.579	0.712	0.692	0.677	0.616	0.724	0.708
Malaysia	0.762	0.761	0.746	0.754	0.752	0.751	0.753	0.757	0.756	0.755	0.651	0.723	0.704
Iran, I.R. of	0.748	0.719	0.741	0.744	0.742	0.741	0.756	0.749	0.749	0.749	0.789	0.759	0.765
Ireland	0.723	0.771	0.683	0.708	0.704	0.700	0.408	0.617	0.587	0.564	0.515	0.652	0.617
Denmark	0.721	0.583	0.562	0.667	0.651	0.639	0.520	0.653	0.633	0.618	0.468	0.635	0.593
Thailand	0.673	0.986	0.935	0.758	0.783	0.801	0.981	0.773	0.802	0.824	0.837	0.726	0.750
Argentina	0.668	0.637	0.662	0.665	0.663	0.663	0.679	0.670	0.670	0.671	0.718	0.683	0.690
South Africa	0.640	0.520	0.553	0.609	0.601	0.594	0.575	0.617	0.610	0.605	0.543	0.606	0.589
Nigeria	0.515	0.663	0.682	0.569	0.584	0.596	0.700	0.575	0.592	0.605	0.733	0.585	0.621
Greece	0.509	0.349	0.317	0.444	0.426	0.412	0.331	0.449	0.432	0.419	0.300	0.439	0.403
Finland	0.505	0.414	0.374	0.461	0.448	0.438	0.393	0.467	0.456	0.448	0.334	0.447	0.418
United Arab Emirates	0.485	0.910	0.851	0.604	0.639	0.664	0.406	0.567	0.591	0.608	0.710	0.558	0.594
Czech Republic	0.457	0.470	0.464	0.458	0.458	0.459	0.406	0.439	0.434	0.430	0.379	0.430	0.416
Portugal	0.432	0.368	0.350	0.404	0.396	0.389	0.368	0.410	0.403	0.399	0.316	0.392	0.373

Table 1. Illustrative Allocations – Selective Increase – by Member^{1/} (continued)
 (In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula					
			Overall Increase			Overall Increase			Overall Increase					
			50%	75%	100%	50%	75%	100%	50%	75%	100%			
Colombia	0.429	0.439	0.471	0.442	0.445	0.448	0.485	0.446	0.451	0.455	0.487	0.447	0.452	0.456
Philippines	0.428	0.483	0.488	0.447	0.452	0.456	0.504	0.452	0.459	0.464	0.482	0.445	0.452	0.453
Egypt	0.427	0.511	0.510	0.453	0.461	0.466	0.522	0.457	0.466	0.473	0.554	0.468	0.480	0.488
Pakistan	0.426	0.391	0.428	0.427	0.428	0.434	0.443	0.430	0.432	0.433	0.476	0.441	0.446	0.449
Ukraine	0.422	0.397	0.297	0.380	0.367	0.358	0.312	0.384	0.374	0.366	0.272	0.371	0.356	0.346
Algeria	0.411	0.453	0.420	0.413	0.413	0.414	0.432	0.417	0.418	0.420	0.387	0.402	0.399	0.397
Hungary	0.407	0.398	0.348	0.386	0.380	0.376	0.289	0.367	0.356	0.347	0.278	0.363	0.350	0.341
Hungary	0.405	0.321	0.307	0.372	0.362	0.355	0.322	0.377	0.369	0.363	0.267	0.359	0.345	0.335
Israel	0.403	0.431	0.429	0.410	0.412	0.414	0.447	0.416	0.420	0.423	0.385	0.396	0.394	0.392
Romania	0.380	0.381	0.341	0.366	0.362	0.359	0.356	0.371	0.368	0.366	0.319	0.359	0.353	0.348
Chile	0.366	0.426	0.402	0.377	0.380	0.382	0.419	0.382	0.387	0.391	0.380	0.369	0.370	0.371
Iraq	0.349	0.408	0.367	0.354	0.355	0.356	0.379	0.358	0.360	0.362	0.355	0.350	0.350	0.350
Libya	0.330	0.244	0.149	0.269	0.252	0.239	0.154	0.271	0.254	0.242	0.114	0.257	0.237	0.221
Peru	0.280	0.319	0.310	0.289	0.292	0.294	0.320	0.292	0.296	0.299	0.301	0.286	0.288	0.289
Luxembourg	0.277	0.673	0.559	0.369	0.396	0.416	0.099	0.218	0.201	0.188	0.341	0.298	0.303	0.308
New Zealand	0.262	0.244	0.244	0.256	0.254	0.252	0.255	0.259	0.258	0.258	0.227	0.250	0.246	0.244
Kazakhstan	0.243	0.382	0.354	0.279	0.289	0.297	0.368	0.284	0.295	0.304	0.340	0.274	0.283	0.290
Vietnam	0.242	0.438	0.454	0.311	0.331	0.346	0.470	0.317	0.338	0.354	0.400	0.293	0.308	0.319
Syrian Arab Republic	0.233	0.173	0.192	0.219	0.215	0.212	0.196	0.220	0.216	0.214	0.209	0.224	0.222	0.220
Bangladesh	0.224	0.278	0.313	0.253	0.261	0.267	0.321	0.255	0.264	0.271	0.327	0.257	0.267	0.274
Congo, Dem. Rep. of	0.223	0.084	0.065	0.223	0.223	0.223	0.068	0.223	0.223	0.223	0.060	0.223	0.223	0.223
Slovak Republic	0.210	0.259	0.231	0.216	0.218	0.220	0.188	0.202	0.200	0.198	0.186	0.201	0.199	0.197
Zambia	0.205	0.051	0.050	0.153	0.138	0.127	0.051	0.154	0.139	0.128	0.045	0.152	0.136	0.125
Bulgaria	0.188	0.159	0.135	0.170	0.165	0.161	0.142	0.172	0.168	0.164	0.114	0.163	0.156	0.150
Morocco	0.187	0.201	0.203	0.192	0.194	0.195	0.211	0.195	0.197	0.199	0.191	0.188	0.188	0.189
Angola	0.155	0.253	0.218	0.175	0.181	0.186	0.228	0.179	0.186	0.191	0.195	0.168	0.171	0.174
Ghana	0.155	0.087	0.086	0.132	0.125	0.120	0.090	0.133	0.127	0.122	0.079	0.129	0.122	0.117
Qatar	0.154	0.404	0.362	0.222	0.242	0.256	0.379	0.228	0.249	0.265	0.316	0.207	0.222	0.234
Croatia	0.150	0.113	0.107	0.135	0.131	0.128	0.112	0.137	0.133	0.131	0.091	0.130	0.125	0.121
Zimbabwe	0.148	0.029	0.029	0.148	0.148	0.148	0.031	0.148	0.148	0.148	0.025	0.148	0.148	0.148
Ecuador	0.146	0.148	0.147	0.146	0.146	0.146	0.153	0.148	0.148	0.149	0.145	0.146	0.145	0.145
Belarus	0.143	0.169	0.156	0.147	0.148	0.149	0.165	0.150	0.152	0.153	0.137	0.141	0.140	0.140
Serbia	0.137	0.108	0.093	0.122	0.118	0.115	0.097	0.124	0.120	0.117	0.081	0.118	0.113	0.109
Côte d'Ivoire	0.136	0.062	0.064	0.112	0.105	0.100	0.067	0.113	0.106	0.101	0.058	0.110	0.103	0.097
Lebanon	0.133	0.151	0.127	0.131	0.130	0.129	0.121	0.129	0.127	0.127	0.098	0.121	0.118	0.115
Sudan	0.132	0.103	0.107	0.123	0.121	0.119	0.109	0.124	0.122	0.120	0.115	0.126	0.124	0.123
Slovenia	0.123	0.115	0.102	0.116	0.114	0.112	0.088	0.111	0.108	0.105	0.082	0.109	0.105	0.102
Sri Lanka	0.121	0.125	0.138	0.126	0.128	0.129	0.142	0.128	0.130	0.131	0.138	0.127	0.128	0.129
Uzbekistan	0.116	0.115	0.120	0.117	0.117	0.117	0.123	0.118	0.118	0.119	0.115	0.115	0.115	0.115
Tunisia	0.114	0.108	0.103	0.110	0.109	0.108	0.107	0.112	0.111	0.110	0.092	0.107	0.105	0.103

Table 1. Illustrative Allocations – Selective Increase – by Member^{1/} (continued)
 (In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			Overall Increase		
			Overall Increase			Overall Increase			Overall Increase					
			50%	75%	100%	50%	75%	100%	50%	75%	100%			
Oman	0.114	0.190	0.171	0.133	0.138	0.142	0.180	0.136	0.142	0.146	0.147	0.125	0.128	0.130
Kenya	0.114	0.094	0.099	0.109	0.107	0.106	0.102	0.110	0.108	0.107	0.097	0.108	0.106	0.105
Myanmar	0.108	0.124	0.129	0.115	0.117	0.118	0.132	0.116	0.118	0.120	0.136	0.117	0.120	0.122
Yemen	0.102	0.080	0.066	0.102	0.102	0.102	0.068	0.102	0.102	0.102	0.064	0.102	0.102	0.102
Dominican Republic	0.100	0.110	0.111	0.103	0.104	0.105	0.115	0.105	0.106	0.107	0.106	0.102	0.102	0.103
Trinidad and Tobago	0.098	0.084	0.067	0.088	0.085	0.082	0.063	0.086	0.083	0.080	0.052	0.083	0.079	0.075
Lithuania	0.093	0.131	0.109	0.098	0.099	0.100	0.096	0.094	0.094	0.094	0.088	0.091	0.090	0.090
Uruguay	0.090	0.084	0.081	0.087	0.086	0.085	0.084	0.088	0.087	0.087	0.073	0.084	0.083	0.081
Guatemala	0.090	0.093	0.101	0.093	0.094	0.095	0.104	0.094	0.096	0.097	0.095	0.091	0.092	0.092
Tanzania	0.083	0.085	0.082	0.083	0.083	0.083	0.084	0.083	0.083	0.083	0.082	0.083	0.083	0.083
Bahrain	0.083	0.088	0.080	0.082	0.081	0.081	0.075	0.080	0.079	0.079	0.065	0.077	0.075	0.074
Azerbaijan	0.082	0.133	0.131	0.098	0.103	0.106	0.137	0.100	0.105	0.109	0.122	0.095	0.099	0.102
Jamaica	0.080	0.035	0.030	0.063	0.059	0.055	0.032	0.064	0.059	0.056	0.025	0.062	0.056	0.053
Panama	0.079	0.103	0.104	0.087	0.089	0.091	0.103	0.087	0.089	0.090	0.087	0.081	0.082	0.083
Costa Rica	0.077	0.080	0.081	0.079	0.079	0.079	0.085	0.080	0.080	0.081	0.074	0.076	0.076	0.075
Uganda	0.076	0.045	0.050	0.076	0.076	0.076	0.051	0.076	0.076	0.076	0.049	0.076	0.076	0.076
Jordan	0.072	0.091	0.087	0.077	0.078	0.079	0.091	0.078	0.080	0.081	0.072	0.072	0.072	0.072
Latvia	0.070	0.074	0.065	0.068	0.067	0.067	0.063	0.067	0.067	0.066	0.053	0.064	0.062	0.061
Afghanistan	0.068	0.064	0.046	0.068	0.068	0.068	0.048	0.068	0.068	0.068	0.042	0.068	0.068	0.068
Senegal	0.068	0.036	0.032	0.068	0.068	0.068	0.033	0.068	0.068	0.068	0.028	0.068	0.068	0.068
Iceland	0.067	0.131	0.031	0.055	0.052	0.049	0.031	0.055	0.052	0.049	0.024	0.053	0.049	0.046
Cyprus	0.064	0.070	0.056	0.061	0.060	0.060	0.043	0.057	0.055	0.053	0.043	0.057	0.054	0.053
Brunei	0.063	0.048	0.037	0.054	0.052	0.050	0.039	0.055	0.053	0.051	0.031	0.052	0.049	0.047
Ethiopia	0.063	0.088	0.094	0.073	0.076	0.078	0.097	0.074	0.077	0.080	0.096	0.074	0.077	0.079
El Salvador	0.060	0.050	0.049	0.056	0.055	0.054	0.051	0.057	0.056	0.055	0.044	0.055	0.053	0.052
Cameroon	0.058	0.050	0.052	0.056	0.055	0.055	0.054	0.056	0.056	0.056	0.050	0.055	0.054	0.054
Bosnia & Herzegovina	0.056	0.042	0.040	0.050	0.049	0.048	0.042	0.051	0.050	0.049	0.035	0.048	0.046	0.045
Papua New Guinea	0.055	0.035	0.034	0.048	0.046	0.045	0.036	0.049	0.047	0.045	0.030	0.047	0.044	0.043
Nicaragua	0.055	0.027	0.028	0.046	0.043	0.041	0.030	0.046	0.044	0.042	0.024	0.044	0.041	0.039
Liberia	0.054	0.010	0.008	0.054	0.054	0.054	0.005	0.054	0.054	0.054	0.005	0.054	0.054	0.054
Honduras	0.052	0.043	0.042	0.049	0.048	0.047	0.044	0.050	0.049	0.048	0.036	0.047	0.045	0.044
South Sudan	0.052	0.042	0.025	0.052	0.052	0.052	0.027	0.052	0.052	0.052	0.023	0.052	0.052	0.052
Madagascar	0.051	0.022	0.022	0.051	0.051	0.051	0.024	0.051	0.051	0.051	0.022	0.051	0.051	0.051
Estonia	0.051	0.071	0.060	0.054	0.055	0.055	0.050	0.051	0.050	0.050	0.047	0.050	0.049	0.049
Bolivia	0.050	0.064	0.065	0.055	0.057	0.058	0.068	0.056	0.058	0.059	0.058	0.053	0.053	0.054
Turkmenistan	0.050	0.095	0.092	0.064	0.068	0.071	0.095	0.065	0.069	0.072	0.077	0.059	0.061	0.063
Mozambique	0.048	0.038	0.034	0.048	0.048	0.048	0.036	0.048	0.048	0.048	0.029	0.048	0.048	0.048
Gabon	0.045	0.039	0.035	0.042	0.041	0.040	0.037	0.042	0.041	0.041	0.030	0.040	0.039	0.038
Guinea	0.045	0.017	0.014	0.045	0.045	0.045	0.014	0.045	0.045	0.045	0.012	0.045	0.045	0.045
Georgia	0.044	0.035	0.036	0.041	0.041	0.040	0.038	0.042	0.041	0.041	0.030	0.039	0.038	0.037

Table 1. Illustrative Allocations – Selective Increase – by Member^{1/} (continued)
 (In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			
			Overall Increase			Overall Increase			Overall Increase			
			50%	75%	100%	50%	75%	100%	50%	75%	100%	
Sierra Leone	0.0435	0.0123	0.0105	0.0435	0.0435	0.0435	0.0109	0.0435	0.0435	0.0092	0.0435	0.0435
Paraguay	0.0422	0.0596	0.0586	0.0475	0.0490	0.0502	0.0611	0.0484	0.0501	0.0514	0.0451	0.0460
Botswana	0.0413	0.0435	0.0394	0.0406	0.0404	0.0402	0.0413	0.0412	0.0411	0.0318	0.0381	0.0371
Namibia	0.0401	0.0302	0.0278	0.0359	0.0347	0.0338	0.0293	0.0364	0.0353	0.0232	0.0344	0.0315
Mali	0.0391	0.0285	0.0254	0.0391	0.0391	0.0391	0.0264	0.0391	0.0391	0.0232	0.0391	0.0391
Bahamas, The	0.0382	0.0173	0.0162	0.0308	0.0287	0.0271	0.0169	0.0311	0.0290	0.0131	0.0298	0.0274
Guyana	0.0381	0.0088	0.0082	0.0281	0.0253	0.0231	0.0078	0.0280	0.0251	0.0063	0.0275	0.0245
Kyrgyz Republic	0.0372	0.0226	0.0214	0.0372	0.0372	0.0372	0.0213	0.0372	0.0372	0.0171	0.0372	0.0372
Cambodia	0.0367	0.0440	0.0463	0.0398	0.0407	0.0413	0.0485	0.0405	0.0416	0.0390	0.0373	0.0377
Tajikistan	0.0365	0.0197	0.0194	0.0307	0.0291	0.0279	0.0203	0.0310	0.0295	0.0172	0.0300	0.0268
Moldova	0.0362	0.0235	0.0204	0.0309	0.0293	0.0282	0.0207	0.0310	0.0295	0.0163	0.0295	0.0276
Malta	0.0353	0.0672	0.0582	0.0428	0.0449	0.0465	0.0215	0.0306	0.0293	0.0368	0.0357	0.0358
Haiti	0.0343	0.0199	0.0185	0.0343	0.0343	0.0343	0.0192	0.0343	0.0343	0.0158	0.0343	0.0343
Somalia	0.0343	0.0122	0.0131	0.0272	0.0251	0.0236	0.0126	0.0270	0.0249	0.0104	0.0263	0.0240
Congo, Rep. of	0.0340	0.0523	0.0349	0.0342	0.0342	0.0343	0.0325	0.0334	0.0332	0.0274	0.0317	0.0310
Rwanda	0.0336	0.0179	0.0154	0.0336	0.0336	0.0336	0.0159	0.0336	0.0336	0.0143	0.0336	0.0336
Equatorial Guinea	0.0330	0.0558	0.0472	0.0376	0.0389	0.0399	0.0436	0.0364	0.0374	0.0378	0.0345	0.0349
Nepal	0.0329	0.0447	0.0475	0.0376	0.0390	0.0400	0.0490	0.0381	0.0396	0.0438	0.0364	0.0374
Burundi	0.0323	0.0058	0.0058	0.0323	0.0323	0.0323	0.0060	0.0323	0.0323	0.0054	0.0323	0.0323
Togo	0.0308	0.0127	0.0111	0.0308	0.0308	0.0308	0.0117	0.0308	0.0308	0.0091	0.0308	0.0308
Mauritius	0.0298	0.0461	0.0345	0.0313	0.0317	0.0320	0.0305	0.0300	0.0300	0.0264	0.0286	0.0283
Macedonia, FYR	0.0294	0.0296	0.0277	0.0288	0.0286	0.0284	0.0290	0.0292	0.0292	0.0231	0.0272	0.0266
Chad	0.0294	0.0282	0.0258	0.0294	0.0294	0.0294	0.0269	0.0294	0.0294	0.0232	0.0294	0.0294
Albania	0.0292	0.0287	0.0278	0.0287	0.0285	0.0284	0.0289	0.0290	0.0290	0.0245	0.0276	0.0271
Malawi	0.0291	0.0160	0.0146	0.0291	0.0291	0.0291	0.0151	0.0291	0.0291	0.0131	0.0291	0.0291
Niger	0.0276	0.0150	0.0156	0.0276	0.0276	0.0276	0.0161	0.0276	0.0276	0.0140	0.0276	0.0276
Suriname	0.0270	0.0120	0.0110	0.0216	0.0201	0.0190	0.0115	0.0218	0.0203	0.0091	0.0210	0.0193
Armenia	0.0270	0.0256	0.0241	0.0260	0.0257	0.0254	0.0252	0.0263	0.0261	0.0208	0.0249	0.0243
Mauritania	0.0270	0.0145	0.0134	0.0224	0.0211	0.0201	0.0140	0.0226	0.0214	0.0115	0.0218	0.0203
Benin	0.0260	0.0195	0.0177	0.0260	0.0260	0.0260	0.0183	0.0260	0.0260	0.0161	0.0260	0.0260
Burkina Faso	0.0252	0.0222	0.0232	0.0252	0.0252	0.0252	0.0240	0.0252	0.0252	0.0216	0.0252	0.0252
Central African Rep.	0.0234	0.0038	0.0031	0.0234	0.0234	0.0234	0.0032	0.0234	0.0234	0.0027	0.0234	0.0234
Lao P.D.R.	0.0222	0.0227	0.0242	0.0228	0.0230	0.0231	0.0250	0.0230	0.0233	0.0235	0.0224	0.0224
Fiji	0.0206	0.0105	0.0105	0.0172	0.0163	0.0155	0.0109	0.0173	0.0164	0.0083	0.0165	0.0145
Barbados	0.0198	0.0095	0.0095	0.0163	0.0153	0.0146	0.0089	0.0162	0.0151	0.0073	0.0156	0.0144
Kosovo	0.0173	0.0154	0.0159	0.0168	0.0167	0.0166	0.0166	0.0170	0.0170	0.0137	0.0161	0.0157
Swaziland	0.0165	0.0122	0.0120	0.0149	0.0145	0.0142	0.0126	0.0151	0.0148	0.0098	0.0142	0.0136
Mongolia	0.0152	0.0370	0.0298	0.0200	0.0213	0.0224	0.0312	0.0219	0.0219	0.0260	0.0187	0.0197
Lesotho	0.0146	0.0086	0.0082	0.0125	0.0118	0.0114	0.0069	0.0121	0.0113	0.0059	0.0117	0.0109
Gambia, The	0.0130	0.0026	0.0027	0.0130	0.0130	0.0130	0.0028	0.0130	0.0130	0.0022	0.0130	0.0130

Table 1. Illustrative Allocations – Selective Increase – by Member^{1/} (concluded)
 (In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula					
			Overall Increase			Overall Increase			Overall Increase					
			50%	75%	100%	50%	75%	100%	50%	75%	100%			
Montenegro	0.01268	0.01236	0.01078	0.01202	0.01183	0.01169	0.01131	0.01220	0.01206	0.01195	0.00881	0.01137	0.01099	0.01071
San Marino	0.01031	0.00912	0.00669	0.00909	0.00874	0.00848	0.00389	0.00816	0.00755	0.00709	0.00435	0.00832	0.00774	0.00732
Eritrea	0.00767	0.00709	0.00737	0.00767	0.00767	0.00767	0.00761	0.00767	0.00767	0.00767	0.00676	0.00767	0.00767	0.00767
Djibouti	0.00667	0.00403	0.00381	0.00667	0.00667	0.00667	0.00399	0.00667	0.00667	0.00667	0.00302	0.00667	0.00667	0.00667
Guinea-Bissau	0.00595	0.00576	0.00247	0.00595	0.00595	0.00595	0.00255	0.00595	0.00595	0.00595	0.00212	0.00595	0.00595	0.00595
Belize	0.00560	0.00462	0.00456	0.00524	0.00514	0.00506	0.00449	0.00522	0.00511	0.00503	0.00344	0.00487	0.00466	0.00451
Timor-Leste	0.00537	0.01075	0.00902	0.00656	0.00690	0.00716	0.00948	0.00672	0.00710	0.00739	0.00728	0.00598	0.00616	0.00629
Vanuatu	0.00499	0.00214	0.00184	0.00394	0.00363	0.00341	0.00173	0.00390	0.00359	0.00335	0.00132	0.00376	0.00341	0.00315
Cabo Verde	0.00497	0.00502	0.00476	0.00489	0.00486	0.00485	0.00481	0.00490	0.00488	0.00487	0.00364	0.00452	0.00439	0.00429
Seychelles	0.00480	0.00576	0.00475	0.00477	0.00476	0.00476	0.00376	0.00445	0.00434	0.00427	0.00331	0.00429	0.00415	0.00404
St. Lucia	0.00449	0.00320	0.00315	0.00403	0.00390	0.00381	0.00331	0.00408	0.00397	0.00388	0.00244	0.00380	0.00360	0.00345
Maldives	0.00444	0.01051	0.00924	0.00602	0.00647	0.00680	0.00761	0.00548	0.00578	0.00600	0.00672	0.00518	0.00540	0.00555
Solomon Islands	0.00436	0.00308	0.00289	0.00436	0.00436	0.00436	0.00249	0.00436	0.00436	0.00436	0.00200	0.00436	0.00436	0.00436
Bhutan	0.00428	0.00702	0.00595	0.00482	0.00497	0.00509	0.00621	0.00490	0.00508	0.00522	0.00471	0.00441	0.00445	0.00447
Antigua and Barbuda	0.00419	0.00302	0.00301	0.00379	0.00368	0.00359	0.00316	0.00384	0.00374	0.00366	0.00234	0.00357	0.00339	0.00326
Comoros	0.00373	0.00176	0.00166	0.00373	0.00373	0.00373	0.00175	0.00373	0.00373	0.00373	0.00128	0.00373	0.00373	0.00373
Grenada	0.00344	0.00241	0.00194	0.00293	0.00279	0.00268	0.00202	0.00296	0.00283	0.00272	0.00155	0.00280	0.00262	0.00249
Samoa	0.00340	0.00184	0.00185	0.00288	0.00273	0.00262	0.00188	0.00289	0.00274	0.00263	0.00139	0.00272	0.00253	0.00239
São Tomé and Príncipe	0.00310	0.00141	0.00081	0.00310	0.00310	0.00310	0.00084	0.00310	0.00310	0.00310	0.00063	0.00310	0.00310	0.00310
Tonga	0.00289	0.00133	0.00128	0.00235	0.00220	0.00208	0.00108	0.00228	0.00211	0.00198	0.00087	0.00222	0.00202	0.00188
St. Kitts	0.00262	0.00217	0.00205	0.00242	0.00237	0.00233	0.00215	0.00246	0.00241	0.00238	0.00156	0.00226	0.00216	0.00208
St. Vincent	0.00245	0.00179	0.00169	0.00219	0.00212	0.00206	0.00176	0.00222	0.00215	0.00210	0.00132	0.00207	0.00196	0.00188
Dominica	0.00241	0.00126	0.00122	0.00201	0.00190	0.00181	0.00128	0.00203	0.00192	0.00184	0.00094	0.00192	0.00178	0.00167
Kiribati	0.00235	0.00123	0.00096	0.00188	0.00175	0.00165	0.00079	0.00183	0.00168	0.00157	0.00054	0.00174	0.00157	0.00144
Micronesia, FS of	0.00151	0.00124	0.00103	0.00135	0.00130	0.00127	0.00077	0.00126	0.00119	0.00114	0.00067	0.00123	0.00115	0.00109
Marshall Islands	0.00103	0.00085	0.00068	0.00091	0.00088	0.00085	0.00041	0.00082	0.00076	0.00072	0.00043	0.00083	0.00077	0.00073
Palau	0.00103	0.00076	0.00074	0.00093	0.00090	0.00088	0.00058	0.00088	0.00083	0.00080	0.00051	0.00085	0.00080	0.00076
Nauru	0.00059	0.00038	0.00037	0.00051	0.00049	0.00048	0.00028	0.00048	0.00045	0.00043	0.00024	0.00047	0.00044	0.00041
Tuvalu	0.00052	0.00023	0.00020	0.00041	0.00038	0.00036	0.00011	0.00039	0.00035	0.00032	0.00011	0.00039	0.00035	0.00032

Source: Finance Department.

^{1/} All simulations show distributions based on the quota formula (i.e., selective increases) plus ad hoc increases where needed to protect the shares of the poorest members (37 members).

^{2/} Including China, P.R., Hong Kong SAR, and Macao SAR.

Table 2. Illustrative Allocations – Selective Increase with Ad Hoc Element in Proportion to Measure of Voluntary Financial Contributions (5 percent of total increase) – by Member^{1/2/}
(In percent)

	14th Review	Current Formula	VFCS II	Formula 1.2	Overall Increase			Formula 3.2.c	Midpoint Set C Formula			Overall Increase			
					50%	75%	100%		50%	75%	100%	50%	75%	100%	
United States	17.398	14.478	5.255	15.158	16.446	16.174	15.970	15.630	16.595	16.366	16.194	17.375	17.139	17.065	17.009
Japan	6.461	5.100	21.297	5.125	6.271	6.217	6.177	5.285	6.322	6.282	6.252	5.300	6.326	6.287	6.258
China ^{3/}	6.390	12.581	6.518	13.342	8.558	9.177	9.642	13.727	8.680	9.334	9.825	14.260	8.844	9.545	10.070
Germany	5.583	4.951	7.440	4.929	5.394	5.340	5.299	5.099	5.448	5.409	5.380	4.688	5.317	5.242	5.185
France	4.225	3.168	6.859	3.230	3.945	3.865	3.805	3.385	3.994	3.928	3.879	3.185	3.931	3.847	3.783
United Kingdom	4.225	3.568	6.302	3.438	4.001	3.937	3.889	3.606	4.054	4.006	3.969	3.354	3.974	3.903	3.849
Italy	3.159	2.399	4.533	2.395	2.934	2.869	2.821	2.501	2.967	2.912	2.871	2.403	2.936	2.872	2.824
India	2.749	3.113	1.681	3.425	2.936	2.990	3.030	3.511	2.964	3.025	3.071	3.804	3.055	3.142	3.207
Russia	2.705	2.564	1.479	2.572	2.636	2.616	2.601	2.659	2.663	2.651	2.642	2.665	2.664	2.653	2.644
Brazil	2.315	2.250	1.686	2.328	2.302	2.299	2.296	2.379	2.319	2.320	2.320	2.554	2.373	2.389	2.402
Canada	2.311	2.030	4.050	2.089	2.264	2.251	2.241	2.187	2.295	2.291	2.287	2.033	2.246	2.228	2.214
Saudi Arabia	2.095	1.663	2.324	1.473	1.898	1.841	1.799	1.524	1.914	1.862	1.823	1.321	1.850	1.780	1.727
Spain	1.999	1.753	2.604	1.712	1.914	1.889	1.871	1.791	1.938	1.921	1.908	1.680	1.903	1.876	1.855
Mexico	1.868	1.737	1.284	1.767	1.822	1.809	1.799	1.836	1.843	1.836	1.831	1.768	1.822	1.809	1.799
Netherlands	1.831	2.070	3.423	1.901	1.875	1.887	1.897	1.236	1.666	1.619	1.583	1.505	1.750	1.727	1.710
Korea, Republic of	1.799	1.989	2.412	2.150	1.915	1.948	1.973	2.255	1.948	1.990	2.022	1.972	1.859	1.876	1.888
Australia	1.378	1.432	1.584	1.461	1.404	1.411	1.417	1.519	1.422	1.435	1.444	1.482	1.410	1.419	1.426
Belgium	1.344	1.113	2.346	1.052	1.265	1.243	1.226	0.764	1.175	1.127	1.090	0.846	1.201	1.160	1.129
Switzerland	1.210	1.723	4.027	1.506	1.347	1.386	1.415	1.184	1.246	1.256	1.264	1.153	1.235	1.243	1.248
Turkey	0.977	1.161	0.349	1.180	1.027	1.042	1.053	1.218	1.039	1.057	1.071	1.224	1.041	1.059	1.073
Indonesia	0.974	1.307	0.014	1.401	1.090	1.123	1.148	1.437	1.101	1.137	1.164	1.527	1.129	1.173	1.206
Sweden	0.929	0.896	1.588	0.832	0.907	0.901	0.896	0.814	0.901	0.893	0.887	0.730	0.875	0.859	0.848
Poland	0.859	0.921	0.710	0.910	0.870	0.873	0.876	0.953	0.883	0.891	0.896	0.842	0.849	0.846	0.844
Austria	0.824	0.717	0.850	0.679	0.777	0.763	0.753	0.635	0.763	0.746	0.733	0.589	0.748	0.727	0.711
Singapore	0.816	1.307	0.400	1.203	0.928	0.961	0.985	0.660	0.758	0.741	0.729	0.853	0.818	0.819	0.819
Norway	0.787	0.715	1.752	0.652	0.759	0.750	0.744	0.685	0.769	0.764	0.760	0.582	0.736	0.722	0.711
Venezuela, R.B. de	0.780	0.556	0.000	0.565	0.698	0.674	0.656	0.579	0.702	0.680	0.663	0.616	0.714	0.695	0.680
Malaysia	0.762	0.761	0.152	0.746	0.744	0.740	0.736	0.753	0.747	0.743	0.740	0.651	0.715	0.701	0.691
Iran, I.R. of	0.748	0.719	0.009	0.741	0.731	0.727	0.723	0.756	0.736	0.733	0.730	0.789	0.746	0.746	0.746
Ireland	0.723	0.771	0.006	0.683	0.697	0.689	0.683	0.408	0.611	0.578	0.554	0.515	0.644	0.621	0.604
Denmark	0.721	0.583	1.167	0.562	0.677	0.664	0.655	0.520	0.663	0.647	0.635	0.468	0.647	0.626	0.610
Thailand	0.673	0.986	0.340	0.935	0.748	0.770	0.786	0.981	0.763	0.788	0.807	0.837	0.717	0.730	0.739
Argentina	0.668	0.637	0.034	0.662	0.654	0.650	0.647	0.679	0.659	0.657	0.655	0.543	0.671	0.672	0.673
South Africa	0.640	0.520	0.218	0.553	0.604	0.594	0.586	0.575	0.611	0.602	0.596	0.543	0.600	0.589	0.581
Nigeria	0.515	0.663	0.015	0.682	0.558	0.570	0.579	0.700	0.563	0.577	0.587	0.733	0.573	0.590	0.603
Greece	0.509	0.349	0.025	0.317	0.439	0.419	0.404	0.331	0.444	0.425	0.411	0.300	0.434	0.412	0.396
Finland	0.505	0.414	0.525	0.374	0.463	0.451	0.442	0.393	0.469	0.459	0.451	0.334	0.450	0.435	0.423
United Arab Emirates	0.485	0.910	0.011	0.851	0.590	0.620	0.643	0.738	0.555	0.575	0.590	0.710	0.546	0.563	0.577
Czech Republic	0.457	0.470	0.129	0.464	0.452	0.451	0.450	0.406	0.434	0.428	0.423	0.379	0.426	0.417	0.410
Portugal	0.432	0.368	0.141	0.350	0.400	0.391	0.384	0.368	0.406	0.398	0.393	0.316	0.390	0.377	0.368

Table 2. Illustrative Allocations – Selective Increase with Ad Hoc Element in Proportion to Measure of Voluntary Financial Contributions (5 percent of total increase) – by Member^{1/2/} (continued)
(In percent)

	14th Review	Current Formula	VFCs II	Formula 1.2	Overall Increase			Formula 3.2.c	Overall Increase			Midpoint Set C Formula	Overall Increase		
					50%	75%	100%		50%	75%	100%		50%	75%	100%
Colombia	0.429	0.439	0.000	0.471	0.434	0.435	0.436	0.485	0.438	0.441	0.443	0.487	0.438	0.441	0.443
Philippines	0.428	0.483	0.129	0.488	0.441	0.444	0.447	0.504	0.446	0.451	0.455	0.487	0.439	0.442	0.444
Egypt	0.427	0.511	0.106	0.510	0.447	0.452	0.456	0.522	0.450	0.457	0.462	0.554	0.460	0.470	0.477
Pakistan	0.426	0.391	0.008	0.434	0.420	0.419	0.418	0.443	0.423	0.422	0.422	0.443	0.433	0.436	0.437
Ukraine	0.422	0.397	0.007	0.297	0.375	0.361	0.351	0.312	0.379	0.367	0.358	0.272	0.367	0.351	0.339
Algeria	0.411	0.453	0.345	0.420	0.411	0.412	0.412	0.432	0.415	0.417	0.417	0.387	0.401	0.398	0.396
Hungary	0.407	0.398	0.003	0.348	0.380	0.373	0.367	0.289	0.362	0.349	0.340	0.278	0.358	0.344	0.334
Kuwait	0.405	0.321	0.715	0.307	0.378	0.371	0.365	0.322	0.383	0.377	0.372	0.267	0.366	0.355	0.346
Israel	0.403	0.431	0.057	0.429	0.404	0.404	0.405	0.447	0.410	0.412	0.413	0.385	0.390	0.387	0.384
Romania	0.380	0.381	0.004	0.341	0.360	0.355	0.351	0.356	0.365	0.361	0.358	0.319	0.353	0.346	0.340
Chile	0.366	0.426	0.209	0.402	0.374	0.376	0.378	0.419	0.379	0.383	0.385	0.380	0.366	0.367	0.367
Iraq	0.349	0.408	0.002	0.367	0.348	0.347	0.347	0.379	0.352	0.352	0.353	0.355	0.344	0.343	0.341
Libya	0.330	0.244	0.078	0.149	0.268	0.250	0.237	0.154	0.270	0.252	0.240	0.114	0.257	0.236	0.220
Peru	0.280	0.319	0.105	0.310	0.286	0.287	0.289	0.320	0.289	0.291	0.293	0.301	0.283	0.284	0.284
Luxembourg	0.277	0.673	0.463	0.559	0.368	0.394	0.413	0.099	0.224	0.208	0.197	0.341	0.300	0.306	0.311
New Zealand	0.262	0.244	0.369	0.244	0.258	0.257	0.256	0.255	0.261	0.261	0.261	0.227	0.252	0.249	0.247
Kazakhstan	0.243	0.382	0.000	0.354	0.273	0.282	0.288	0.368	0.277	0.287	0.295	0.340	0.269	0.276	0.281
Vietnam	0.242	0.438	0.002	0.454	0.304	0.322	0.335	0.470	0.309	0.328	0.342	0.400	0.287	0.300	0.309
Syrian Arab Republic	0.233	0.173	0.010	0.192	0.216	0.211	0.207	0.196	0.217	0.212	0.209	0.209	0.221	0.218	0.215
Bangladesh	0.224	0.278	0.026	0.313	0.248	0.255	0.260	0.321	0.250	0.258	0.264	0.327	0.252	0.260	0.266
Congo, Dem. Rep. of	0.223	0.084	0.053	0.065	0.223	0.223	0.223	0.068	0.223	0.223	0.223	0.060	0.223	0.223	0.223
Slovak Republic	0.210	0.259	0.126	0.231	0.215	0.216	0.217	0.188	0.201	0.199	0.197	0.186	0.200	0.198	0.196
Zambia	0.205	0.051	0.006	0.050	0.152	0.137	0.126	0.051	0.153	0.138	0.127	0.045	0.151	0.136	0.124
Bulgaria	0.188	0.159	0.003	0.135	0.168	0.162	0.158	0.142	0.170	0.165	0.161	0.114	0.161	0.153	0.148
Morocco	0.187	0.201	0.008	0.203	0.189	0.189	0.190	0.211	0.191	0.193	0.193	0.191	0.185	0.185	0.184
Angola	0.155	0.253	0.008	0.218	0.172	0.177	0.180	0.228	0.175	0.181	0.185	0.195	0.165	0.167	0.169
Ghana	0.155	0.087	0.074	0.086	0.131	0.125	0.120	0.090	0.133	0.126	0.121	0.079	0.129	0.122	0.117
Qatar	0.154	0.404	0.084	0.362	0.218	0.236	0.250	0.379	0.223	0.243	0.258	0.316	0.203	0.217	0.228
Croatia	0.150	0.113	0.001	0.107	0.134	0.129	0.125	0.112	0.135	0.131	0.128	0.091	0.129	0.123	0.118
Zimbabwe	0.148	0.029	0.005	0.029	0.148	0.148	0.148	0.031	0.148	0.148	0.148	0.025	0.148	0.148	0.148
Ecuador	0.146	0.148	0.000	0.147	0.144	0.143	0.143	0.153	0.145	0.145	0.145	0.145	0.143	0.142	0.142
Belarus	0.143	0.169	0.002	0.156	0.144	0.145	0.145	0.165	0.147	0.148	0.149	0.137	0.138	0.137	0.136
Serbia	0.137	0.108	0.002	0.093	0.121	0.116	0.113	0.097	0.122	0.118	0.115	0.081	0.117	0.111	0.107
Côte d'Ivoire	0.136	0.062	0.013	0.064	0.111	0.104	0.099	0.067	0.112	0.105	0.100	0.058	0.109	0.102	0.096
Lebanon	0.133	0.151	0.155	0.127	0.131	0.130	0.130	0.121	0.129	0.128	0.127	0.098	0.122	0.119	0.117
Sudan	0.132	0.103	0.001	0.107	0.122	0.119	0.116	0.109	0.122	0.119	0.117	0.115	0.124	0.122	0.120
Slovenia	0.123	0.115	0.072	0.102	0.115	0.113	0.112	0.088	0.111	0.107	0.105	0.082	0.109	0.105	0.102
Sri Lanka	0.121	0.125	0.017	0.138	0.124	0.125	0.126	0.142	0.126	0.127	0.128	0.142	0.138	0.125	0.126
Uzbekistan	0.116	0.115	0.000	0.120	0.115	0.114	0.114	0.123	0.116	0.116	0.116	0.115	0.113	0.113	0.112
Tunisia	0.114	0.108	0.003	0.103	0.108	0.107	0.106	0.107	0.110	0.109	0.108	0.092	0.105	0.103	0.101

Table 2. Illustrative Allocations – Selective Increase with Ad Hoc Element in Proportion to Measure of Voluntary Financial Contributions (5 percent of total increase) – by Member^{1/2/} (continued)
(In percent)

	14th Review	Current Formula	VFCs II	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			Overall Increase		
				Overall Increase			Overall Increase			Overall Increase			Overall Increase		
				50%	75%	100%	50%	75%	100%	50%	75%	100%	50%	75%	100%
Oman	0.114	0.190	0.032	0.171	0.130	0.139	0.180	0.133	0.138	0.143	0.147	0.123	0.125	0.127	
Kenya	0.114	0.094	0.007	0.099	0.107	0.104	0.102	0.108	0.106	0.105	0.097	0.106	0.104	0.103	
Myanmar	0.108	0.124	0.001	0.129	0.113	0.115	0.132	0.114	0.115	0.116	0.136	0.115	0.117	0.118	
Yemen	0.102	0.080	0.008	0.066	0.102	0.102	0.068	0.102	0.102	0.102	0.064	0.102	0.102	0.102	
Dominican Republic	0.100	0.110	0.010	0.111	0.102	0.103	0.115	0.103	0.104	0.105	0.106	0.100	0.100	0.100	
Trinidad and Tobago	0.098	0.084	0.006	0.067	0.087	0.081	0.063	0.085	0.082	0.079	0.052	0.082	0.078	0.074	
Lithuania	0.093	0.131	0.001	0.109	0.096	0.098	0.096	0.092	0.092	0.092	0.088	0.089	0.088	0.088	
Uruguay	0.090	0.084	0.003	0.081	0.086	0.084	0.084	0.086	0.085	0.085	0.073	0.083	0.081	0.080	
Guatemala	0.090	0.093	0.010	0.101	0.092	0.093	0.104	0.093	0.094	0.094	0.095	0.090	0.090	0.090	
Tanzania	0.083	0.085	0.006	0.082	0.083	0.083	0.084	0.083	0.083	0.083	0.082	0.083	0.083	0.083	
Bahrain	0.083	0.088	0.000	0.080	0.080	0.079	0.075	0.079	0.078	0.077	0.065	0.076	0.073	0.072	
Azerbaijan	0.082	0.133	0.000	0.131	0.096	0.100	0.137	0.098	0.102	0.105	0.122	0.093	0.096	0.099	
Jamaica	0.080	0.035	0.009	0.030	0.063	0.055	0.032	0.064	0.059	0.055	0.025	0.062	0.056	0.052	
Panama	0.079	0.103	0.005	0.104	0.085	0.088	0.103	0.085	0.087	0.088	0.087	0.080	0.080	0.081	
Costa Rica	0.077	0.080	0.010	0.081	0.077	0.077	0.085	0.078	0.079	0.079	0.074	0.075	0.074	0.074	
Uganda	0.076	0.045	0.006	0.050	0.076	0.076	0.051	0.076	0.076	0.076	0.049	0.076	0.076	0.076	
Jordan	0.072	0.091	0.017	0.087	0.075	0.077	0.091	0.077	0.078	0.079	0.072	0.071	0.071	0.070	
Latvia	0.070	0.074	0.002	0.065	0.067	0.066	0.063	0.066	0.065	0.065	0.053	0.063	0.061	0.060	
Afghanistan	0.068	0.084	0.001	0.046	0.068	0.068	0.048	0.068	0.068	0.068	0.042	0.068	0.068	0.068	
Senegal	0.068	0.036	0.003	0.032	0.068	0.068	0.033	0.068	0.068	0.068	0.028	0.068	0.068	0.068	
Iceland	0.067	0.131	0.003	0.031	0.055	0.051	0.031	0.055	0.051	0.048	0.024	0.053	0.048	0.045	
Cyprus	0.064	0.070	0.058	0.056	0.061	0.060	0.043	0.057	0.055	0.053	0.043	0.057	0.055	0.053	
Brunei	0.063	0.048	0.024	0.037	0.054	0.052	0.039	0.055	0.052	0.051	0.031	0.052	0.049	0.047	
Ethiopia	0.063	0.088	0.005	0.094	0.072	0.074	0.097	0.072	0.075	0.077	0.096	0.072	0.075	0.077	
El Salvador	0.060	0.050	0.010	0.049	0.056	0.054	0.051	0.056	0.055	0.054	0.044	0.054	0.052	0.051	
Cameroon	0.058	0.050	0.096	0.052	0.057	0.056	0.054	0.057	0.057	0.057	0.050	0.056	0.055	0.055	
Bosnia & Herzegovina	0.056	0.042	0.001	0.040	0.050	0.048	0.042	0.050	0.049	0.048	0.035	0.048	0.046	0.044	
Papua New Guinea	0.055	0.035	0.000	0.034	0.047	0.044	0.036	0.048	0.046	0.044	0.030	0.046	0.044	0.042	
Nicaragua	0.055	0.027	0.009	0.028	0.045	0.043	0.030	0.046	0.043	0.041	0.024	0.044	0.041	0.039	
Liberia	0.054	0.010	0.000	0.008	0.054	0.054	0.005	0.054	0.054	0.054	0.005	0.054	0.054	0.054	
Honduras	0.052	0.043	0.010	0.042	0.048	0.046	0.044	0.049	0.048	0.047	0.036	0.046	0.045	0.043	
South Sudan	0.052	0.042	0.000	0.025	0.052	0.052	0.027	0.052	0.052	0.052	0.023	0.052	0.052	0.052	
Madagascar	0.051	0.022	0.002	0.023	0.051	0.051	0.024	0.051	0.051	0.051	0.022	0.051	0.051	0.051	
Estonia	0.051	0.071	0.001	0.060	0.053	0.054	0.050	0.050	0.049	0.049	0.047	0.049	0.048	0.048	
Bolivia	0.050	0.064	0.000	0.065	0.054	0.055	0.068	0.055	0.056	0.057	0.058	0.052	0.052	0.052	
Turkmenistan	0.050	0.095	0.000	0.092	0.062	0.066	0.095	0.063	0.067	0.070	0.077	0.057	0.060	0.061	
Mozambique	0.048	0.038	0.005	0.034	0.048	0.048	0.036	0.048	0.048	0.048	0.029	0.048	0.048	0.048	
Gabon	0.045	0.039	0.078	0.035	0.042	0.041	0.037	0.043	0.042	0.042	0.030	0.041	0.040	0.039	
Guinea	0.045	0.017	0.005	0.014	0.045	0.045	0.014	0.045	0.045	0.045	0.012	0.045	0.045	0.045	
Georgia	0.044	0.035	0.001	0.036	0.041	0.040	0.038	0.041	0.041	0.040	0.030	0.039	0.038	0.036	

Table 2. Illustrative Allocations – Selective Increase with Ad Hoc Element in Proportion to Measure of Voluntary Financial Contributions (5 percent of total increase) – by Member^{1/2/} (continued)
(In percent)

	14th Review	Current Formula	VFCs II	Formula 1.2	Overall Increase			Formula 3.2.c	Overall Increase			Midpoint Set C Formula	Overall Increase		
					50%	75%	100%		50%	75%	100%		50%	75%	100%
Sierra Leone	0.0435	0.0123	0.0005	0.0105	0.0435	0.0435	0.0435	0.0109	0.0435	0.0435	0.0092	0.0435	0.0435	0.0435	
Paraguay	0.0422	0.0596	0.0005	0.0586	0.0478	0.0487	0.0487	0.0611	0.0474	0.0488	0.0514	0.0443	0.0449	0.0453	
Botswana	0.0413	0.0435	0.0079	0.0394	0.0401	0.0397	0.0394	0.0413	0.0406	0.0404	0.0318	0.0377	0.0366	0.0358	
Namibia	0.0401	0.0302	0.0043	0.0278	0.0355	0.0342	0.0332	0.0293	0.0360	0.0348	0.0339	0.0341	0.0323	0.0311	
Mali	0.0391	0.0285	0.0044	0.0254	0.0391	0.0391	0.0391	0.0264	0.0391	0.0391	0.0232	0.0391	0.0391	0.0391	
Bahamas, The	0.0382	0.0173	0.0086	0.0162	0.0307	0.0286	0.0270	0.0169	0.0309	0.0288	0.0131	0.0297	0.0273	0.0255	
Guyana	0.0381	0.0088	0.0066	0.0082	0.0281	0.0252	0.0231	0.0078	0.0280	0.0251	0.0063	0.0275	0.0245	0.0222	
Kyrgyz Republic	0.0372	0.0226	0.0004	0.0214	0.0372	0.0372	0.0372	0.0213	0.0372	0.0372	0.0171	0.0372	0.0372	0.0372	
Cambodia	0.0367	0.0440	0.0004	0.0463	0.0390	0.0397	0.0402	0.0485	0.0397	0.0405	0.0390	0.0367	0.0367	0.0367	
Tajikistan	0.0365	0.0197	0.0004	0.0194	0.0304	0.0287	0.0274	0.0203	0.0307	0.0291	0.0172	0.0297	0.0278	0.0263	
Moldova	0.0362	0.0235	0.0006	0.0204	0.0305	0.0289	0.0277	0.0207	0.0306	0.0290	0.0163	0.0292	0.0273	0.0258	
Malta	0.0353	0.0672	0.0220	0.0582	0.0422	0.0441	0.0456	0.0215	0.0306	0.0293	0.0368	0.0354	0.0355	0.0355	
Haiti	0.0343	0.0199	0.0041	0.0185	0.0343	0.0343	0.0343	0.0192	0.0343	0.0343	0.0158	0.0343	0.0343	0.0343	
Somalia	0.0343	0.0122	0.0000	0.0131	0.0269	0.0248	0.0233	0.0126	0.0268	0.0247	0.0104	0.0261	0.0238	0.0220	
Congo, Rep. of	0.0340	0.0523	0.0094	0.0349	0.0352	0.0355	0.0359	0.0325	0.0345	0.0346	0.0274	0.0329	0.0326	0.0323	
Rwanda	0.0336	0.0179	0.0082	0.0154	0.0336	0.0336	0.0336	0.0159	0.0336	0.0336	0.0143	0.0336	0.0336	0.0336	
Equatorial Guinea	0.0330	0.0558	0.0594	0.0472	0.0378	0.0392	0.0402	0.0436	0.0367	0.0378	0.0378	0.0349	0.0354	0.0358	
Nepal	0.0329	0.0447	0.0003	0.0475	0.0368	0.0380	0.0388	0.0490	0.0373	0.0386	0.0438	0.0357	0.0365	0.0371	
Burundi	0.0323	0.0058	0.0133	0.0058	0.0323	0.0323	0.0323	0.0060	0.0323	0.0323	0.0054	0.0323	0.0323	0.0323	
Togo	0.0308	0.0127	0.0041	0.0111	0.0308	0.0308	0.0308	0.0117	0.0308	0.0308	0.0091	0.0308	0.0308	0.0308	
Mauritius	0.0298	0.0461	0.3457	0.0345	0.0365	0.0384	0.0398	0.0305	0.0352	0.0367	0.0264	0.0339	0.0351	0.0360	
Macedonia, FYR	0.0294	0.0296	0.0003	0.0277	0.0283	0.0280	0.0277	0.0290	0.0287	0.0285	0.0231	0.0269	0.0261	0.0256	
Chad	0.0294	0.0282	0.0441	0.0258	0.0294	0.0294	0.0294	0.0269	0.0294	0.0294	0.0232	0.0294	0.0294	0.0294	
Albania	0.0292	0.0287	0.0002	0.0278	0.0282	0.0279	0.0277	0.0289	0.0285	0.0284	0.0245	0.0272	0.0266	0.0261	
Malawi	0.0291	0.0160	0.0082	0.0146	0.0291	0.0291	0.0291	0.0151	0.0291	0.0291	0.0131	0.0291	0.0291	0.0291	
Niger	0.0276	0.0150	0.0003	0.0156	0.0276	0.0276	0.0276	0.0161	0.0276	0.0276	0.0140	0.0276	0.0276	0.0276	
Suriname	0.0270	0.0120	0.0052	0.0110	0.0215	0.0200	0.0188	0.0115	0.0217	0.0202	0.0091	0.0210	0.0192	0.0179	
Armenia	0.0270	0.0256	0.0004	0.0241	0.0256	0.0256	0.0249	0.0252	0.0259	0.0256	0.0208	0.0245	0.0238	0.0233	
Mauritania	0.0270	0.0145	0.0017	0.0134	0.0222	0.0209	0.0199	0.0140	0.0224	0.0211	0.0115	0.0216	0.0201	0.0190	
Benin	0.0260	0.0195	0.0027	0.0177	0.0260	0.0260	0.0260	0.0183	0.0260	0.0260	0.0161	0.0260	0.0260	0.0260	
Burkina Faso	0.0252	0.0222	0.0043	0.0232	0.0252	0.0252	0.0252	0.0240	0.0252	0.0252	0.0216	0.0252	0.0252	0.0252	
Central African Rep.	0.0234	0.0038	0.0149	0.0031	0.0234	0.0234	0.0234	0.0032	0.0234	0.0234	0.0027	0.0234	0.0234	0.0234	
Lao P.D.R.	0.0222	0.0227	0.0003	0.0242	0.0224	0.0224	0.0224	0.0250	0.0226	0.0228	0.0209	0.0220	0.0219	0.0219	
Fiji	0.0206	0.0105	0.0022	0.0105	0.0171	0.0161	0.0153	0.0109	0.0172	0.0162	0.0083	0.0164	0.0152	0.0143	
Barbados	0.0198	0.0095	0.0004	0.0095	0.0162	0.0151	0.0144	0.0089	0.0160	0.0149	0.0073	0.0155	0.0143	0.0133	
Kosovo	0.0173	0.0154	0.0002	0.0159	0.0165	0.0163	0.0162	0.0166	0.0168	0.0166	0.0137	0.0159	0.0154	0.0151	
Swaziland	0.0165	0.0122	0.0030	0.0120	0.0148	0.0143	0.0139	0.0126	0.0150	0.0146	0.0098	0.0141	0.0134	0.0129	
Mongolia	0.0152	0.0370	0.0002	0.0298	0.0195	0.0207	0.0216	0.0312	0.0199	0.0213	0.0260	0.0183	0.0192	0.0198	
Lesotho	0.0146	0.0086	0.0038	0.0082	0.0124	0.0117	0.0113	0.0069	0.0120	0.0112	0.0059	0.0117	0.0108	0.0102	
Gambia, The	0.0130	0.0026	0.0014	0.0027	0.0130	0.0130	0.0130	0.0028	0.0130	0.0130	0.0022	0.0130	0.0130	0.0130	

Table 2. Illustrative Allocations – Selective Increase with Ad Hoc Element in Proportion to Measure of Voluntary Financial Contributions (5 percent of total increase) – by Member^{1/2/} (concluded)
(In percent)

14th Review	Current Formula	VFCS II	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula	Overall Increase				
			50%	75%	100%	50%	75%	100%		50%	75%	100%		
Montenegro	0.01268	0.00007	0.01078	0.01184	0.01160	0.01142	0.01131	0.01201	0.01181	0.01167	0.00881	0.01122	0.01080	0.01049
San Marino	0.01031	0.00053	0.00669	0.00899	0.00861	0.00832	0.00389	0.00811	0.00748	0.00700	0.00435	0.00825	0.00766	0.00722
Eritrea	0.00767	0.00786	0.00737	0.00767	0.00767	0.00767	0.00761	0.00767	0.00767	0.00767	0.00676	0.00767	0.00767	0.00767
Djibouti	0.00667	0.00008	0.00007	0.00667	0.00667	0.00667	0.00399	0.00667	0.00667	0.00667	0.00302	0.00667	0.00667	0.00667
Guinea-Bissau	0.00595	0.00576	0.00247	0.00595	0.00595	0.00595	0.00255	0.00595	0.00595	0.00595	0.00212	0.00595	0.00595	0.00595
Belize	0.00560	0.00462	0.00456	0.00530	0.00522	0.00516	0.00449	0.00528	0.00519	0.00512	0.00344	0.00495	0.00477	0.00463
Timor-Leste	0.00537	0.01075	0.00000	0.00641	0.00671	0.00693	0.00948	0.00656	0.00690	0.00715	0.00728	0.00586	0.00600	0.00611
Vanuatu	0.00499	0.00214	0.00094	0.00392	0.00361	0.00339	0.01173	0.00389	0.00357	0.00333	0.00132	0.00376	0.00340	0.00314
Cabo Verde	0.00497	0.00502	0.00001	0.00481	0.00476	0.00473	0.00481	0.00482	0.00478	0.00475	0.00364	0.00446	0.00431	0.00420
Seychelles	0.00480	0.00576	0.00475	0.00479	0.00479	0.00479	0.00376	0.00448	0.00439	0.00432	0.00331	0.00434	0.00421	0.00411
St. Lucia	0.00449	0.00320	0.00315	0.00407	0.00395	0.00386	0.00331	0.00412	0.00401	0.00393	0.00244	0.00384	0.00366	0.00352
Maldives	0.00444	0.01051	0.00004	0.00586	0.00627	0.00657	0.00761	0.00535	0.00561	0.00581	0.00672	0.00507	0.00525	0.00539
Solomon Islands	0.00436	0.00308	0.00289	0.00436	0.00436	0.00436	0.00249	0.00436	0.00436	0.00436	0.00200	0.00436	0.00436	0.00436
Bhutan	0.00428	0.00702	0.00003	0.00472	0.00485	0.00494	0.00621	0.00480	0.00495	0.00506	0.00471	0.00433	0.00434	0.00436
Antigua and Barbuda	0.00419	0.00302	0.00301	0.00383	0.00372	0.00365	0.00316	0.00387	0.00378	0.00373	0.00234	0.00362	0.00345	0.00333
Comoros	0.00373	0.00176	0.00166	0.00373	0.00373	0.00373	0.00175	0.00373	0.00373	0.00373	0.00128	0.00373	0.00373	0.00373
Grenada	0.00344	0.00241	0.00194	0.00299	0.00286	0.00276	0.00202	0.00301	0.00289	0.00280	0.00155	0.00286	0.00270	0.00258
Samoa	0.00340	0.00184	0.00185	0.00285	0.00269	0.00257	0.00188	0.00286	0.00270	0.00259	0.00139	0.00270	0.00250	0.00236
São Tomé and Príncipe	0.00310	0.00141	0.00081	0.00310	0.00310	0.00310	0.00084	0.00310	0.00310	0.00310	0.00063	0.00310	0.00310	0.00310
Tonga	0.00289	0.00133	0.00128	0.00233	0.00217	0.00205	0.00108	0.00227	0.00209	0.00195	0.00087	0.00220	0.00201	0.00186
St. Kitts	0.00262	0.00217	0.00205	0.00248	0.00244	0.00240	0.00215	0.00251	0.00247	0.00245	0.00156	0.00232	0.00224	0.00217
St. Vincent	0.00245	0.00179	0.00169	0.00225	0.00219	0.00215	0.00176	0.00228	0.00223	0.00219	0.00132	0.00214	0.00205	0.00198
Dominica	0.00241	0.00126	0.00122	0.00210	0.00202	0.00195	0.00128	0.00212	0.00204	0.00198	0.00094	0.00201	0.00190	0.00181
Kiribati	0.00235	0.00123	0.00096	0.00187	0.00173	0.00163	0.00079	0.00181	0.00166	0.00155	0.00054	0.00174	0.00156	0.00143
Micronesia, FS of	0.00151	0.00124	0.00103	0.00133	0.00128	0.00124	0.00077	0.00125	0.00117	0.00112	0.00067	0.00122	0.00113	0.00107
Marshall Islands	0.00103	0.00085	0.00068	0.00090	0.00086	0.00084	0.00041	0.00082	0.00075	0.00071	0.00043	0.00082	0.00076	0.00072
Palau	0.00103	0.00076	0.00000	0.00092	0.00089	0.00086	0.00058	0.00087	0.00082	0.00079	0.00051	0.00084	0.00079	0.00075
Nauru	0.00059	0.00038	0.00037	0.00051	0.00048	0.00047	0.00028	0.00048	0.00045	0.00043	0.00024	0.00047	0.00043	0.00041
Tuvalu	0.00052	0.00023	0.00020	0.00041	0.00038	0.00035	0.00011	0.00039	0.00035	0.00032	0.00011	0.00038	0.00034	0.00031

Source: Finance Department.

1/ All simulations show distributions based on the quota formula (i.e., selective increases) plus ad hoc increases where needed to protect the shares of the poorest members (37 members) and with 5 percent of the overall increase allocated as ad hoc increases based on voluntary financial contributions.

2/ Voluntary financial contributions are based on VFCS II, which is the weighted average of contribution shares, with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined, and 0.2 for capacity development.

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

Table 3. Illustrative Allocations – Selective Increase with Protection for the Group of PRGT-eligible Members and Small Developing States – by Member^{1/}
(In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			Overall Increase		
			Overall Increase			Overall Increase			Overall Increase			Overall Increase		
			50%	75%	100%	50%	75%	100%	50%	75%	100%	50%	75%	100%
United States	17,398	14,478	15,158	16,580	16,347	16,172	15,630	16,737	16,549	16,407	17,375	17,300	17,272	17,251
Japan	6,461	5,100	5,125	5,991	5,857	5,757	5,285	6,045	5,926	5,836	5,300	6,047	5,928	5,839
China ^{2/}	6,390	12,581	13,342	8,645	9,289	9,772	13,727	8,773	9,454	9,964	14,260	8,939	9,668	10,214
Germany	5,583	4,951	4,929	5,342	5,273	5,221	5,099	5,399	5,346	5,306	4,688	5,261	5,168	5,099
France	4,225	3,168	3,230	3,878	3,779	3,705	3,385	3,930	3,845	3,782	3,185	3,862	3,758	3,680
United Kingdom	4,225	3,568	3,438	3,947	3,867	3,807	3,606	4,002	3,939	3,891	3,354	3,917	3,829	3,763
Italy	3,159	2,399	2,395	2,893	2,817	2,760	2,501	2,928	2,862	2,813	2,403	2,895	2,819	2,762
India	2,749	3,113	3,425	2,958	3,018	3,063	3,511	2,987	3,055	3,106	3,804	3,081	3,176	3,247
Russia	2,705	2,564	2,572	2,649	2,633	2,621	2,659	2,678	2,670	2,664	2,665	2,678	2,670	2,664
Brazil	2,315	2,250	2,328	2,308	2,306	2,305	2,379	2,325	2,328	2,331	2,554	2,381	2,400	2,415
Canada	2,311	2,030	2,089	2,227	2,203	2,185	2,187	2,260	2,245	2,234	2,033	2,208	2,178	2,156
Saudi Arabia	2,095	1,663	1,473	1,881	1,819	1,773	1,524	1,897	1,841	1,799	1,321	1,830	1,754	1,697
Spain	1,999	1,753	1,712	1,895	1,866	1,844	1,791	1,921	1,899	1,883	1,680	1,884	1,851	1,826
Mexico	1,868	1,737	1,767	1,826	1,814	1,805	1,836	1,849	1,844	1,839	1,768	1,826	1,814	1,804
Netherlands	1,831	2,070	1,901	1,846	1,850	1,853	1,236	1,627	1,569	1,525	1,505	1,715	1,681	1,656
Korea, Republic of	1,799	1,989	2,150	1,906	1,937	1,960	2,255	1,941	1,981	2,012	1,972	1,847	1,860	1,870
Australia	1,378	1,432	1,461	1,399	1,405	1,409	1,519	1,418	1,429	1,438	1,482	1,405	1,412	1,418
Belgium	1,344	1,113	1,052	1,241	1,212	1,190	0,764	1,147	1,091	1,049	0,846	1,174	1,125	1,088
Switzerland	1,210	1,723	1,506	1,302	1,328	1,347	1,184	1,196	1,192	1,189	1,153	1,185	1,178	1,172
Turkey	0,977	1,161	1,180	1,039	1,057	1,070	1,218	1,051	1,073	1,089	1,224	1,053	1,074	1,091
Indonesia	0,974	1,307	1,401	1,110	1,149	1,178	1,437	1,122	1,164	1,196	1,527	1,151	1,201	1,239
Sweden	0,929	0,896	0,832	0,893	0,882	0,875	0,814	0,887	0,875	0,866	0,730	0,859	0,839	0,824
Poland	0,859	0,921	0,910	0,871	0,875	0,878	0,953	0,886	0,893	0,899	0,842	0,849	0,846	0,844
Austria	0,824	0,717	0,679	0,773	0,758	0,747	0,635	0,758	0,740	0,725	0,589	0,743	0,719	0,702
Singapore	0,816	1,307	1,203	0,939	0,975	1,001	0,660	0,761	0,745	0,733	0,853	0,824	0,826	0,828
Norway	0,787	0,715	0,652	0,739	0,725	0,715	0,685	0,750	0,739	0,732	0,582	0,716	0,695	0,680
Venezuela, R.B. de	0,780	0,556	0,565	0,706	0,685	0,669	0,579	0,711	0,691	0,676	0,616	0,722	0,706	0,693
Malaysia	0,762	0,761	0,746	0,753	0,750	0,748	0,753	0,756	0,754	0,752	0,651	0,721	0,710	0,701
Iran, I.R. of	0,748	0,719	0,741	0,742	0,740	0,739	0,756	0,747	0,747	0,747	0,789	0,758	0,760	0,762
Ireland	0,723	0,771	0,683	0,707	0,702	0,698	0,408	0,616	0,586	0,563	0,515	0,651	0,630	0,615
Denmark	0,721	0,583	0,562	0,665	0,650	0,638	0,520	0,652	0,632	0,617	0,468	0,634	0,609	0,591
Thailand	0,673	0,986	0,935	0,756	0,780	0,798	0,981	0,771	0,800	0,821	0,837	0,724	0,738	0,749
Argentina	0,668	0,637	0,662	0,663	0,662	0,661	0,679	0,669	0,669	0,669	0,718	0,681	0,685	0,688
South Africa	0,640	0,520	0,553	0,608	0,599	0,593	0,575	0,615	0,608	0,603	0,543	0,604	0,594	0,587
Nigeria	0,515	0,663	0,682	0,567	0,582	0,594	0,700	0,573	0,590	0,603	0,733	0,583	0,603	0,618
Greece	0,509	0,349	0,317	0,444	0,425	0,411	0,331	0,448	0,431	0,418	0,300	0,438	0,417	0,402
Finland	0,505	0,414	0,374	0,460	0,447	0,437	0,393	0,466	0,455	0,447	0,334	0,446	0,430	0,417
United Arab Emirates	0,485	0,910	0,851	0,603	0,636	0,662	0,738	0,566	0,589	0,606	0,710	0,556	0,576	0,592
Czech Republic	0,457	0,470	0,464	0,457	0,457	0,457	0,406	0,438	0,433	0,429	0,379	0,429	0,421	0,415
Portugal	0,432	0,368	0,350	0,403	0,395	0,388	0,368	0,409	0,402	0,397	0,316	0,392	0,380	0,372

Table 3. Illustrative Allocations – Selective Increase with Protection for the Group of PRGT-eligible Members and Small Developing States – by Member^{1/} (continued)
(In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			Overall Increase		
			Overall Increase			Overall Increase			Overall Increase			Overall Increase		
			50%	75%	100%	50%	75%	100%	50%	75%	100%	50%	75%	100%
Colombia	0.429	0.439	0.471	0.444	0.447	0.485	0.445	0.450	0.453	0.487	0.445	0.450	0.454	
Philippines	0.428	0.483	0.488	0.451	0.455	0.504	0.451	0.458	0.462	0.482	0.444	0.448	0.451	
Egypt	0.427	0.511	0.510	0.452	0.465	0.522	0.456	0.465	0.471	0.554	0.467	0.478	0.486	
Pakistan	0.426	0.391	0.426	0.427	0.427	0.443	0.430	0.431	0.431	0.476	0.440	0.444	0.447	
Ukraine	0.422	0.397	0.297	0.379	0.367	0.312	0.384	0.373	0.365	0.272	0.370	0.356	0.345	
Algeria	0.411	0.453	0.420	0.412	0.412	0.432	0.416	0.417	0.418	0.387	0.401	0.398	0.396	
Hungary	0.407	0.398	0.348	0.385	0.379	0.289	0.366	0.355	0.346	0.278	0.362	0.350	0.340	
Kuwait	0.405	0.321	0.307	0.371	0.361	0.322	0.376	0.368	0.362	0.267	0.358	0.344	0.334	
Israel	0.403	0.431	0.429	0.409	0.411	0.447	0.415	0.419	0.422	0.385	0.395	0.393	0.391	
Romania	0.380	0.381	0.341	0.365	0.361	0.356	0.370	0.367	0.365	0.319	0.358	0.352	0.347	
Chile	0.366	0.426	0.402	0.376	0.379	0.419	0.382	0.386	0.389	0.380	0.368	0.369	0.370	
Iraq	0.349	0.408	0.367	0.353	0.354	0.379	0.357	0.359	0.361	0.355	0.349	0.349	0.349	
Libya	0.330	0.244	0.149	0.269	0.252	0.154	0.271	0.254	0.241	0.114	0.257	0.236	0.221	
Peru	0.280	0.319	0.310	0.288	0.291	0.320	0.292	0.295	0.298	0.301	0.285	0.287	0.288	
Luxembourg	0.277	0.673	0.559	0.368	0.394	0.099	0.217	0.200	0.187	0.341	0.297	0.302	0.307	
New Zealand	0.262	0.244	0.244	0.255	0.253	0.255	0.258	0.258	0.257	0.227	0.249	0.246	0.243	
Kazakhstan	0.243	0.382	0.354	0.278	0.288	0.368	0.283	0.294	0.303	0.340	0.273	0.282	0.289	
Vietnam	0.242	0.438	0.454	0.310	0.330	0.470	0.316	0.337	0.353	0.400	0.292	0.307	0.318	
Syrian Arab Republic	0.233	0.173	0.192	0.218	0.214	0.196	0.220	0.216	0.213	0.209	0.224	0.221	0.219	
Bangladesh	0.224	0.278	0.313	0.252	0.260	0.321	0.255	0.263	0.270	0.327	0.256	0.266	0.273	
Congo, Dem. Rep. of	0.223	0.084	0.065	0.223	0.223	0.068	0.223	0.223	0.223	0.060	0.223	0.223	0.223	
Slovak Republic	0.210	0.259	0.231	0.216	0.218	0.188	0.202	0.200	0.198	0.186	0.201	0.198	0.196	
Zambia	0.205	0.051	0.050	0.205	0.205	0.051	0.205	0.205	0.205	0.045	0.205	0.205	0.205	
Bulgaria	0.188	0.159	0.135	0.170	0.165	0.142	0.172	0.167	0.164	0.114	0.163	0.155	0.150	
Morocco	0.187	0.201	0.203	0.192	0.193	0.211	0.194	0.196	0.198	0.191	0.188	0.188	0.188	
Angola	0.155	0.253	0.218	0.175	0.181	0.228	0.178	0.185	0.190	0.195	0.167	0.171	0.173	
Ghana	0.155	0.087	0.086	0.155	0.155	0.090	0.155	0.155	0.155	0.079	0.155	0.155	0.155	
Qatar	0.154	0.404	0.362	0.222	0.241	0.379	0.227	0.248	0.264	0.316	0.206	0.221	0.232	
Croatia	0.150	0.113	0.107	0.135	0.131	0.112	0.137	0.133	0.130	0.091	0.130	0.125	0.120	
Zimbabwe	0.148	0.029	0.029	0.148	0.148	0.031	0.148	0.148	0.148	0.025	0.148	0.148	0.148	
Ecuador	0.146	0.148	0.147	0.146	0.146	0.153	0.148	0.148	0.148	0.145	0.145	0.145	0.145	
Belarus	0.143	0.169	0.156	0.147	0.148	0.165	0.149	0.151	0.153	0.137	0.140	0.140	0.139	
Serbia	0.137	0.108	0.093	0.122	0.118	0.097	0.124	0.120	0.117	0.081	0.118	0.113	0.109	
Côte d'Ivoire	0.136	0.062	0.064	0.136	0.136	0.067	0.136	0.136	0.136	0.058	0.136	0.136	0.136	
Lebanon	0.133	0.151	0.127	0.130	0.130	0.121	0.128	0.127	0.126	0.098	0.121	0.117	0.115	
Sudan	0.132	0.103	0.107	0.132	0.132	0.109	0.132	0.132	0.132	0.115	0.132	0.132	0.132	
Slovenia	0.123	0.115	0.102	0.116	0.114	0.088	0.111	0.107	0.105	0.082	0.109	0.105	0.102	
Sri Lanka	0.121	0.125	0.138	0.128	0.129	0.142	0.129	0.129	0.129	0.138	0.126	0.128	0.129	
Uzbekistan	0.116	0.115	0.120	0.116	0.117	0.123	0.117	0.118	0.118	0.115	0.116	0.116	0.116	
Tunisia	0.114	0.108	0.103	0.110	0.109	0.107	0.111	0.111	0.110	0.092	0.107	0.104	0.103	

Table 3. Illustrative Allocations – Selective Increase with Protection for the Group of PRGT-eligible Members and Small Developing States – by Member^{1/} (continued)
(In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			Overall Increase		
			50%	75%	100%	50%	75%	100%	50%	75%	100%	50%	75%	100%
Oman	0.114	0.190	0.171	0.132	0.138	0.141	0.180	0.135	0.141	0.146	0.147	0.124	0.127	0.129
Kenya	0.114	0.094	0.099	0.114	0.114	0.114	0.102	0.114	0.114	0.114	0.097	0.114	0.114	0.114
Myanmar	0.108	0.124	0.129	0.115	0.116	0.118	0.132	0.116	0.118	0.119	0.136	0.117	0.119	0.121
Yemen	0.102	0.080	0.066	0.102	0.102	0.102	0.068	0.102	0.102	0.102	0.064	0.102	0.102	0.102
Dominican Republic	0.100	0.110	0.111	0.103	0.104	0.105	0.115	0.105	0.106	0.107	0.106	0.102	0.102	0.102
Trinidad and Tobago	0.098	0.084	0.067	0.098	0.098	0.098	0.063	0.098	0.098	0.098	0.052	0.098	0.098	0.098
Lithuania	0.093	0.131	0.109	0.097	0.099	0.100	0.096	0.093	0.094	0.094	0.088	0.091	0.090	0.090
Uruguay	0.090	0.084	0.081	0.087	0.086	0.085	0.084	0.088	0.087	0.086	0.073	0.084	0.082	0.081
Guatemala	0.090	0.093	0.101	0.093	0.094	0.095	0.104	0.094	0.095	0.096	0.095	0.091	0.092	0.092
Tanzania	0.083	0.085	0.082	0.083	0.083	0.083	0.084	0.083	0.083	0.083	0.082	0.083	0.083	0.083
Bahrain	0.082	0.088	0.080	0.081	0.081	0.081	0.075	0.080	0.079	0.078	0.065	0.076	0.075	0.075
Azerbaijan	0.082	0.133	0.131	0.098	0.102	0.106	0.137	0.100	0.105	0.108	0.122	0.095	0.099	0.101
Jamaica	0.080	0.035	0.080	0.063	0.059	0.055	0.032	0.064	0.059	0.056	0.025	0.062	0.056	0.052
Panama	0.079	0.103	0.104	0.087	0.089	0.091	0.103	0.086	0.089	0.090	0.087	0.081	0.082	0.082
Costa Rica	0.077	0.080	0.081	0.078	0.079	0.079	0.085	0.079	0.080	0.080	0.074	0.076	0.076	0.075
Uganda	0.076	0.045	0.050	0.076	0.076	0.076	0.051	0.076	0.076	0.076	0.049	0.076	0.076	0.076
Jordan	0.072	0.091	0.087	0.076	0.078	0.079	0.091	0.078	0.079	0.081	0.072	0.072	0.072	0.072
Latvia	0.070	0.074	0.065	0.068	0.067	0.067	0.063	0.067	0.066	0.066	0.053	0.064	0.062	0.061
Afghanistan	0.068	0.084	0.046	0.068	0.068	0.068	0.048	0.068	0.068	0.068	0.042	0.068	0.068	0.068
Senegal	0.068	0.036	0.032	0.068	0.068	0.068	0.033	0.068	0.068	0.068	0.028	0.068	0.068	0.068
Iceland	0.067	0.131	0.031	0.055	0.051	0.049	0.031	0.055	0.052	0.049	0.024	0.053	0.049	0.046
Cyprus	0.064	0.070	0.056	0.061	0.060	0.059	0.043	0.057	0.054	0.053	0.043	0.056	0.054	0.053
Brunei	0.063	0.048	0.037	0.054	0.052	0.050	0.039	0.055	0.053	0.051	0.031	0.052	0.049	0.047
Ethiopia	0.063	0.088	0.094	0.073	0.076	0.078	0.097	0.074	0.077	0.079	0.096	0.074	0.077	0.079
El Salvador	0.060	0.050	0.049	0.056	0.055	0.054	0.051	0.057	0.056	0.055	0.044	0.054	0.053	0.052
Cameroon	0.058	0.050	0.052	0.058	0.058	0.058	0.054	0.058	0.058	0.058	0.050	0.058	0.058	0.058
Bosnia & Herzegovina	0.056	0.042	0.040	0.050	0.049	0.048	0.042	0.051	0.050	0.049	0.035	0.048	0.046	0.045
Papua New Guinea	0.055	0.035	0.034	0.055	0.055	0.055	0.036	0.055	0.055	0.055	0.030	0.055	0.055	0.055
Nicaragua	0.055	0.027	0.028	0.055	0.055	0.055	0.030	0.055	0.055	0.055	0.024	0.055	0.055	0.055
Liberia	0.054	0.010	0.008	0.054	0.054	0.054	0.005	0.054	0.054	0.054	0.005	0.054	0.054	0.054
Honduras	0.052	0.043	0.042	0.052	0.052	0.052	0.044	0.052	0.052	0.052	0.036	0.052	0.052	0.052
South Sudan	0.052	0.042	0.025	0.052	0.052	0.052	0.027	0.052	0.052	0.052	0.023	0.052	0.052	0.052
Madagascar	0.051	0.022	0.021	0.051	0.051	0.051	0.024	0.051	0.051	0.051	0.022	0.051	0.051	0.051
Estonia	0.051	0.071	0.060	0.054	0.055	0.055	0.050	0.050	0.050	0.050	0.047	0.050	0.049	0.049
Bolivia	0.050	0.064	0.065	0.055	0.056	0.057	0.068	0.056	0.057	0.059	0.058	0.053	0.053	0.054
Turkmenistan	0.050	0.095	0.092	0.064	0.067	0.070	0.095	0.065	0.069	0.072	0.077	0.059	0.061	0.063
Mozambique	0.048	0.038	0.034	0.048	0.048	0.048	0.036	0.048	0.048	0.048	0.029	0.048	0.048	0.048
Gabon	0.045	0.039	0.035	0.042	0.041	0.040	0.037	0.042	0.041	0.041	0.030	0.040	0.039	0.037
Guinea	0.045	0.017	0.014	0.045	0.045	0.045	0.014	0.045	0.045	0.045	0.012	0.045	0.045	0.045
Georgia	0.044	0.035	0.036	0.041	0.040	0.040	0.038	0.042	0.041	0.041	0.030	0.039	0.038	0.037

Table 3. Illustrative Allocations – Selective Increase with Protection for the Group of PRGT-eligible Members and Small Developing States – by Member^{1/} (continued)
(In percent)

	14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			Overall Increase		
			Overall Increase			Overall Increase			Overall Increase			Overall Increase		
			50%	75%	100%	50%	75%	100%	50%	75%	100%	50%	75%	100%
Sierra Leone	0.0435	0.0123	0.0105	0.0435	0.0435	0.0435	0.0109	0.0435	0.0435	0.0435	0.0092	0.0435	0.0435	0.0435
Paraguay	0.0422	0.0596	0.0586	0.0474	0.0489	0.0500	0.0611	0.0482	0.0500	0.0512	0.0514	0.0450	0.0458	0.0464
Botswana	0.0413	0.0435	0.0394	0.0405	0.0403	0.0401	0.0413	0.0411	0.0411	0.0410	0.0318	0.0380	0.0370	0.0363
Namibia	0.0401	0.0302	0.0278	0.0359	0.0347	0.0338	0.0293	0.0363	0.0353	0.0345	0.0232	0.0343	0.0327	0.0314
Mali	0.0391	0.0285	0.0254	0.0391	0.0391	0.0391	0.0264	0.0391	0.0391	0.0391	0.0232	0.0391	0.0391	0.0391
Bahamas, The	0.0382	0.0173	0.0162	0.0382	0.0382	0.0382	0.0169	0.0382	0.0382	0.0382	0.0131	0.0382	0.0382	0.0382
Guyana	0.0381	0.0088	0.0082	0.0381	0.0381	0.0381	0.0078	0.0381	0.0381	0.0381	0.0063	0.0381	0.0381	0.0381
Kyrgyz Republic	0.0372	0.0226	0.0214	0.0372	0.0372	0.0372	0.0213	0.0372	0.0372	0.0372	0.0171	0.0372	0.0372	0.0372
Cambodia	0.0367	0.0440	0.0463	0.0397	0.0405	0.0412	0.0485	0.0404	0.0415	0.0423	0.0390	0.0372	0.0374	0.0375
Tajikistan	0.0365	0.0197	0.0194	0.0365	0.0365	0.0365	0.0203	0.0365	0.0365	0.0365	0.0172	0.0365	0.0365	0.0365
Moldova	0.0362	0.0235	0.0204	0.0362	0.0362	0.0362	0.0207	0.0362	0.0362	0.0362	0.0163	0.0362	0.0362	0.0362
Malta	0.0353	0.0672	0.0582	0.0426	0.0447	0.0463	0.0215	0.0306	0.0292	0.0282	0.0368	0.0356	0.0357	0.0358
Haiti	0.0343	0.0199	0.0185	0.0343	0.0343	0.0343	0.0192	0.0343	0.0343	0.0343	0.0158	0.0343	0.0343	0.0343
Somalia	0.0343	0.0122	0.0131	0.0343	0.0343	0.0343	0.0126	0.0343	0.0343	0.0343	0.0104	0.0343	0.0343	0.0343
Congo, Rep. of	0.0340	0.0523	0.0349	0.0341	0.0341	0.0342	0.0325	0.0340	0.0340	0.0340	0.0274	0.0340	0.0340	0.0340
Rwanda	0.0336	0.0179	0.0154	0.0336	0.0336	0.0336	0.0159	0.0336	0.0336	0.0336	0.0143	0.0336	0.0336	0.0336
Equatorial Guinea	0.0330	0.0558	0.0472	0.0375	0.0388	0.0398	0.0436	0.0364	0.0373	0.0380	0.0378	0.0344	0.0348	0.0351
Nepal	0.0329	0.0447	0.0475	0.0375	0.0388	0.0398	0.0490	0.0380	0.0395	0.0406	0.0438	0.0363	0.0373	0.0380
Burundi	0.0323	0.0058	0.0058	0.0323	0.0323	0.0323	0.0060	0.0323	0.0323	0.0323	0.0054	0.0323	0.0323	0.0323
Togo	0.0308	0.0127	0.0111	0.0308	0.0308	0.0308	0.0117	0.0308	0.0308	0.0308	0.0091	0.0308	0.0308	0.0308
Mauritius	0.0298	0.0461	0.0345	0.0312	0.0316	0.0319	0.0305	0.0299	0.0299	0.0299	0.0264	0.0298	0.0298	0.0298
Macedonia, FYR	0.0294	0.0296	0.0277	0.0287	0.0285	0.0283	0.0290	0.0292	0.0291	0.0290	0.0231	0.0272	0.0265	0.0261
Chad	0.0294	0.0282	0.0258	0.0294	0.0294	0.0294	0.0269	0.0294	0.0294	0.0294	0.0232	0.0294	0.0294	0.0294
Albania	0.0292	0.0287	0.0278	0.0286	0.0284	0.0283	0.0289	0.0290	0.0289	0.0289	0.0245	0.0275	0.0270	0.0267
Malawi	0.0291	0.0160	0.0146	0.0291	0.0291	0.0291	0.0151	0.0291	0.0291	0.0291	0.0131	0.0291	0.0291	0.0291
Niger	0.0276	0.0150	0.0156	0.0276	0.0276	0.0276	0.0161	0.0276	0.0276	0.0276	0.0140	0.0276	0.0276	0.0276
Suriname	0.0270	0.0120	0.0110	0.0270	0.0270	0.0270	0.0115	0.0270	0.0270	0.0270	0.0091	0.0270	0.0270	0.0270
Armenia	0.0270	0.0256	0.0241	0.0259	0.0256	0.0254	0.0252	0.0263	0.0261	0.0259	0.0208	0.0248	0.0242	0.0237
Mauritania	0.0270	0.0145	0.0134	0.0270	0.0270	0.0270	0.0140	0.0270	0.0270	0.0270	0.0115	0.0270	0.0270	0.0270
Benin	0.0260	0.0195	0.0177	0.0260	0.0260	0.0260	0.0183	0.0260	0.0260	0.0260	0.0161	0.0260	0.0260	0.0260
Burkina Faso	0.0252	0.0222	0.0232	0.0252	0.0252	0.0252	0.0240	0.0252	0.0252	0.0252	0.0216	0.0252	0.0252	0.0252
Central African Rep.	0.0234	0.0038	0.0031	0.0234	0.0234	0.0234	0.0032	0.0234	0.0234	0.0234	0.0027	0.0234	0.0234	0.0234
Lao P.D.R.	0.0222	0.0227	0.0242	0.0227	0.0229	0.0230	0.0250	0.0230	0.0232	0.0234	0.0230	0.0233	0.0224	0.0224
Fiji	0.0206	0.0105	0.0105	0.0206	0.0206	0.0206	0.0109	0.0206	0.0206	0.0206	0.0083	0.0206	0.0206	0.0206
Barbados	0.0198	0.0095	0.0095	0.0198	0.0198	0.0198	0.0089	0.0198	0.0198	0.0198	0.0073	0.0198	0.0198	0.0198
Kosovo	0.0173	0.0154	0.0159	0.0168	0.0166	0.0165	0.0166	0.0170	0.0169	0.0169	0.0137	0.0161	0.0157	0.0154
Swaziland	0.0165	0.0122	0.0120	0.0165	0.0165	0.0165	0.0126	0.0165	0.0165	0.0165	0.0098	0.0165	0.0165	0.0165
Mongolia	0.0152	0.0370	0.0298	0.0199	0.0213	0.0223	0.0312	0.0204	0.0218	0.0229	0.0260	0.0186	0.0196	0.0204
Lesotho	0.0146	0.0086	0.0082	0.0146	0.0146	0.0146	0.0069	0.0146	0.0146	0.0146	0.0059	0.0146	0.0146	0.0146
Gambia, The	0.0130	0.0026	0.0027	0.0130	0.0130	0.0130	0.0028	0.0130	0.0130	0.0130	0.0022	0.0130	0.0130	0.0130

Table 3. Illustrative Allocations – Selective Increase with Protection for the Group of PRGT-eligible Members and Small Developing States – by Member^{1/} (concluded)
(In percent)

14th Review	Current Formula	Formula 1.2			Formula 3.2.c			Midpoint Set C Formula			Overall Increase		
		Overall Increase			Overall Increase			Overall Increase			Overall Increase		
		50%	75%	100%	50%	75%	100%	50%	75%	100%	50%	75%	100%
Montenegro	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268	0.01268
San Marino	0.01031	0.00908	0.00846	0.00899	0.00815	0.00708	0.00881	0.00830	0.00773	0.00730	0.00676	0.00667	0.00667
Eritrea	0.00767	0.00737	0.00767	0.00767	0.00767	0.00767	0.00767	0.00767	0.00767	0.00767	0.00767	0.00767	0.00767
Djibouti	0.00667	0.00381	0.00667	0.00399	0.00667	0.00667	0.00302	0.00667	0.00667	0.00667	0.00667	0.00667	0.00667
Guinea-Bissau	0.00595	0.00247	0.00595	0.00255	0.00595	0.00595	0.00212	0.00595	0.00595	0.00595	0.00595	0.00595	0.00595
Belize	0.00560	0.00462	0.00560	0.00449	0.00560	0.00560	0.00344	0.00560	0.00560	0.00560	0.00560	0.00560	0.00560
Timor-Leste	0.00537	0.01075	0.00654	0.00902	0.00688	0.00713	0.00728	0.00670	0.00708	0.00614	0.00627	0.00627	0.00627
Vanuatu	0.00499	0.00214	0.00499	0.00173	0.00499	0.00499	0.00132	0.00499	0.00499	0.00499	0.00499	0.00499	0.00499
Cabo Verde	0.00497	0.00502	0.00476	0.00476	0.00497	0.00497	0.00364	0.00497	0.00497	0.00497	0.00497	0.00497	0.00497
Seychelles	0.00480	0.00576	0.00480	0.00376	0.00480	0.00480	0.00331	0.00480	0.00480	0.00480	0.00480	0.00480	0.00480
St. Lucia	0.00449	0.00320	0.00449	0.00331	0.00449	0.00449	0.00244	0.00449	0.00449	0.00449	0.00449	0.00449	0.00449
Maldives	0.00444	0.01051	0.00600	0.00624	0.00644	0.00678	0.00672	0.00546	0.00576	0.00537	0.00553	0.00553	0.00553
Solomon Islands	0.00436	0.00308	0.00436	0.00289	0.00436	0.00436	0.00200	0.00436	0.00436	0.00436	0.00436	0.00436	0.00436
Bhutan	0.00428	0.00702	0.00481	0.00595	0.00481	0.00507	0.00471	0.00489	0.00507	0.00440	0.00443	0.00446	0.00446
Antigua and Barbuda	0.00419	0.00302	0.00419	0.00316	0.00419	0.00419	0.00234	0.00419	0.00419	0.00419	0.00419	0.00419	0.00419
Comoros	0.00373	0.00176	0.00373	0.00175	0.00373	0.00373	0.00128	0.00373	0.00373	0.00373	0.00373	0.00373	0.00373
Grenada	0.00344	0.00241	0.00344	0.00202	0.00344	0.00344	0.00155	0.00344	0.00344	0.00344	0.00344	0.00344	0.00344
Samoa	0.00340	0.00184	0.00340	0.00188	0.00340	0.00340	0.00139	0.00340	0.00340	0.00340	0.00340	0.00340	0.00340
São Tomé and Príncipe	0.00310	0.00141	0.00310	0.00084	0.00310	0.00310	0.00063	0.00310	0.00310	0.00310	0.00310	0.00310	0.00310
Tonga	0.00289	0.00133	0.00289	0.00108	0.00289	0.00289	0.00087	0.00289	0.00289	0.00289	0.00289	0.00289	0.00289
St. Kitts	0.00262	0.00217	0.00262	0.00215	0.00262	0.00262	0.00156	0.00262	0.00262	0.00262	0.00262	0.00262	0.00262
St. Vincent	0.00245	0.00179	0.00245	0.00176	0.00245	0.00245	0.00132	0.00245	0.00245	0.00245	0.00245	0.00245	0.00245
Dominica	0.00241	0.00126	0.00241	0.00128	0.00241	0.00241	0.00094	0.00241	0.00241	0.00241	0.00241	0.00241	0.00241
Kiribati	0.00235	0.00123	0.00235	0.00079	0.00235	0.00235	0.00054	0.00235	0.00235	0.00235	0.00235	0.00235	0.00235
Micronesia, FS of	0.00151	0.00124	0.00151	0.00077	0.00151	0.00151	0.00067	0.00151	0.00151	0.00151	0.00151	0.00151	0.00151
Marshall Islands	0.00103	0.00085	0.00103	0.00041	0.00103	0.00103	0.00043	0.00103	0.00103	0.00103	0.00103	0.00103	0.00103
Palau	0.00076	0.00076	0.00076	0.00058	0.00076	0.00076	0.00051	0.00076	0.00076	0.00076	0.00076	0.00076	0.00076
Nauru	0.00059	0.00037	0.00059	0.00028	0.00059	0.00059	0.00024	0.00059	0.00059	0.00059	0.00059	0.00059	0.00059
Tuvalu	0.00052	0.00023	0.00052	0.00011	0.00052	0.00052	0.00011	0.00052	0.00052	0.00052	0.00052	0.00052	0.00052

Source: Finance Department.

1/ All simulations show distributions based on the quota formula (i.e., selective increases) plus ad hoc increases where needed to protect the shares of PRGT-eligible members and small developing states. (84 members).
2/ Including China, P.R., Hong Kong SAR, and Macao SAR.

Table 4. Financial Contributions to the Fund: Selected Indicators and Aggregate Measures – by Member
 (In percent)

	14th Review	Share in Financial Contributions to				Various Aggregate Measures			
		NAB with Rollback ^{1/}	Bilateral Borrowing Agreements ^{2/}	PRGT Loans ^{3/}	Concessional Financing Subsidies ^{4/}	Capacity Development ^{5/}	VFCs ^{6/}	VFCs II ^{7/}	VFCs III ^{8/}
United States	17.398	15.648	0.000	0.000	12.332	0.657	5.727	5.255	12.785
Japan	6.461	18.592	13.434	24.565	13.798	35.758	21.229	21.297	15.600
China ^{9/}	6.390	8.800	9.627	5.062	1.990	0.422	5.180	6.518	4.696
Germany	5.583	7.152	10.814	7.734	6.379	2.756	6.967	7.440	5.119
France	4.225	5.259	8.182	13.775	7.451	1.461	7.226	6.859	5.310
United Kingdom	4.225	5.259	2.887	9.359	9.582	9.895	7.396	6.302	5.435
Italy	3.159	3.828	6.118	7.256	5.047	0.874	4.625	4.533	3.398
India	2.749	2.464	2.239	0.000	1.261	1.131	1.419	1.681	2.020
Russia	2.705	2.464	2.239	0.000	1.411	0.097	1.242	1.479	1.988
Brazil	2.315	2.464	2.239	1.406	0.200	0.180	1.298	1.686	1.701
Canada	2.311	2.149	2.579	4.781	5.148	8.315	4.594	4.050	3.376
Saudi Arabia	2.095	3.136	3.358	1.406	2.550	0.273	2.145	2.324	1.576
Spain	1.999	1.889	3.872	4.407	1.267	0.516	2.390	2.604	1.756
Mexico	1.868	1.408	2.239	0.000	1.225	0.737	1.122	1.284	1.373
Netherlands	1.831	2.549	3.546	4.078	3.156	4.056	3.477	3.423	2.555
Korea, Republic of	1.799	1.856	3.358	3.073	1.600	1.424	2.262	2.412	1.662
Australia	1.378	1.232	1.450	0.000	1.220	3.685	1.517	1.584	1.115
Belgium	1.344	2.216	2.603	2.953	2.355	1.651	2.356	2.346	1.731
Switzerland	1.210	3.074	1.907	4.504	2.422	8.522	4.086	4.027	3.002
Turkey	0.977	0.000	1.119	0.000	0.366	0.000	0.297	0.349	0.718
Indonesia	0.974	0.000	0.000	0.000	0.187	0.037	0.045	0.014	0.716
Sweden	0.929	1.252	2.327	1.406	2.959	0.894	1.768	1.588	1.299
Poland	0.859	0.713	1.634	0.000	0.160	0.000	0.501	0.710	0.631
Austria	0.824	1.009	1.597	0.000	1.353	0.105	0.813	0.850	0.606
Singapore	0.816	0.360	0.896	0.000	0.648	0.006	0.382	0.400	0.600
Norway	0.787	1.091	1.887	2.109	1.401	2.304	1.759	1.752	1.292
Venezuela, R.B. de	0.780	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.573
Malaysia	0.762	0.189	0.224	0.000	0.818	0.000	0.246	0.152	0.560
Iran, I.R. of	0.748	0.000	0.000	0.000	0.256	0.000	0.051	0.009	0.549
Ireland	0.723	0.000	0.000	0.000	0.182	0.000	0.036	0.006	0.531
Denmark	0.721	0.904	1.381	1.687	1.401	0.768	1.230	1.167	0.904
Thailand	0.673	0.189	0.896	0.000	0.416	0.000	0.300	0.340	0.495
Argentina	0.668	0.000	0.000	0.000	0.977	0.000	0.195	0.034	0.491
South Africa	0.640	0.189	0.448	0.000	0.684	0.018	0.268	0.218	0.470
Nigeria	0.515	0.000	0.000	0.000	0.426	0.000	0.085	0.015	0.378
Greece	0.509	0.000	0.000	0.000	0.718	0.000	0.144	0.025	0.374
Finland	0.505	0.629	0.980	0.000	0.829	0.069	0.501	0.525	0.371
United Arab Emirates	0.485	0.000	0.000	0.000	0.153	0.027	0.036	0.011	0.356
Czech Republic	0.457	0.000	0.391	0.000	0.350	0.000	0.148	0.129	0.336
Portugal	0.432	0.435	0.000	0.000	0.303	0.000	0.148	0.141	0.317

Table 4. Financial Contributions to the Fund: Selected Indicators and Aggregate Measures – by Member (continued)
 (In percent)

	14th Review	Share in Financial Contributions to				Various Aggregate Measures			
		NAB with Rollback ^{1/}	Bilateral Borrowing Agreements ^{2/}	PRGT Loans ^{3/}	Concessional Financing Subsidies ^{4/}	Capacity Development ^{5/}	VFCs ^{6/}	VFCs II ^{7/}	VFCs III ^{8/}
Colombia	0.429	0.000	0.000	0.000	0.012	0.000	0.002	0.000	0.315
Philippines	0.428	0.189	0.224	0.000	0.155	0.000	0.114	0.129	0.315
Egypt	0.427	0.000	0.000	0.438	0.304	0.114	0.171	0.106	0.314
Pakistan	0.426	0.000	0.000	0.000	0.220	0.000	0.044	0.008	0.313
Ukraine	0.422	0.000	0.000	0.000	0.188	0.000	0.038	0.007	0.310
Algeria	0.411	0.000	1.119	0.000	0.277	0.000	0.279	0.345	0.302
Hungary	0.407	0.000	0.000	0.000	0.080	0.000	0.016	0.003	0.299
Kuwait	0.405	0.189	0.000	0.000	0.265	3.245	0.740	0.715	0.544
Israel	0.403	0.189	0.000	0.000	0.024	0.000	0.042	0.057	0.296
Romania	0.380	0.000	0.000	0.000	0.101	0.000	0.020	0.004	0.279
Chile	0.366	0.383	0.302	0.000	0.106	0.000	0.158	0.209	0.269
Iraq	0.349	0.000	0.000	0.000	0.047	0.000	0.009	0.002	0.256
Libya	0.330	0.000	0.000	0.000	0.097	0.372	0.094	0.078	0.242
Peru	0.280	0.000	0.346	0.000	0.049	0.000	0.079	0.105	0.206
Luxembourg	0.277	0.274	0.537	0.000	0.239	1.055	0.421	0.463	0.309
New Zealand	0.262	0.189	0.224	0.000	0.145	1.202	0.352	0.369	0.259
Kazakhstan	0.243	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.178
Vietnam	0.242	0.000	0.000	0.000	0.068	0.000	0.014	0.002	0.178
Syrian Arab Republic	0.233	0.000	0.000	0.000	0.000	0.052	0.010	0.010	0.171
Bangladesh	0.224	0.000	0.000	0.000	0.107	0.111	0.044	0.026	0.164
Congo, Dem. Rep. of	0.223	0.000	0.000	0.000	0.073	0.254	0.066	0.053	0.164
Slovak Republic	0.210	0.000	0.406	0.000	0.106	0.002	0.103	0.126	0.154
Zambia	0.205	0.000	0.000	0.000	0.067	0.018	0.017	0.006	0.151
Bulgaria	0.188	0.000	0.000	0.000	0.079	0.000	0.016	0.003	0.138
Morocco	0.187	0.000	0.000	0.000	0.231	0.000	0.046	0.008	0.138
Angola	0.155	0.000	0.000	0.000	0.028	0.037	0.013	0.008	0.114
Ghana	0.155	0.000	0.000	0.000	0.021	0.369	0.078	0.074	0.114
Qatar	0.154	0.000	0.000	0.000	0.027	0.416	0.089	0.084	0.113
Croatia	0.150	0.000	0.000	0.000	0.030	0.000	0.006	0.001	0.111
Zimbabwe	0.148	0.000	0.000	0.000	0.049	0.018	0.013	0.005	0.109
Ecuador	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107
Belarus	0.143	0.000	0.000	0.000	0.053	0.000	0.011	0.002	0.105
Serbia	0.137	0.000	0.000	0.000	0.064	0.000	0.013	0.002	0.101
Côte d'Ivoire	0.136	0.000	0.000	0.000	0.045	0.057	0.020	0.013	0.100
Lebanon	0.133	0.000	0.000	0.000	0.000	0.774	0.155	0.155	0.114
Sudan	0.132	0.000	0.000	0.000	0.000	0.007	0.001	0.001	0.097
Slovenia	0.123	0.000	0.237	0.000	0.025	0.000	0.052	0.000	0.090
Sri Lanka	0.121	0.000	0.000	0.000	0.064	0.074	0.028	0.017	0.089
Uzbekistan	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.085
Tunisia	0.114	0.000	0.000	0.000	0.073	0.000	0.015	0.003	0.084

Table 4. Financial Contributions to the Fund: Selected Indicators and Aggregate Measures – by Member (continued)
 (In percent)

	14th Review	Share in Financial Contributions to				Various Aggregate Measures			
		NAB with Rollback ^{1/}	Bilateral Borrowing Agreements ^{2/}	PRGT Loans ^{3/}	Concessional Financing Subsidies ^{4/}	Capacity Development ^{5/}	VFCIS ^{6/}	VFCIS II ^{7/}	VFCIS III ^{8/}
Oman	0.114	0.000	0.000	0.000	0.083	0.147	0.046	0.032	0.084
Kenya	0.114	0.000	0.000	0.000	0.037	0.028	0.013	0.007	0.084
Myanmar	0.108	0.000	0.000	0.000	0.035	0.000	0.007	0.001	0.080
Yemen	0.102	0.000	0.000	0.000	0.024	0.037	0.012	0.008	0.075
Dominican Republic	0.100	0.000	0.000	0.000	0.000	0.048	0.010	0.010	0.074
Trinidad and Tobago	0.098	0.000	0.000	0.000	0.032	0.024	0.011	0.006	0.072
Lithuania	0.093	0.000	0.000	0.000	0.025	0.000	0.005	0.001	0.068
Uruguay	0.090	0.000	0.000	0.000	0.096	0.000	0.019	0.003	0.066
Guatemala	0.090	0.000	0.000	0.000	0.000	0.048	0.010	0.010	0.066
Tanzania	0.083	0.000	0.000	0.000	0.027	0.027	0.011	0.006	0.061
Bahrain	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061
Azerbaijan	0.082	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060
Jamaica	0.080	0.000	0.000	0.000	0.074	0.033	0.021	0.009	0.059
Panama	0.079	0.000	0.000	0.000	0.028	0.018	0.009	0.005	0.058
Costa Rica	0.077	0.000	0.000	0.000	0.000	0.049	0.010	0.010	0.057
Uganda	0.076	0.000	0.000	0.000	0.025	0.028	0.010	0.006	0.056
Jordan	0.072	0.000	0.000	0.000	0.023	0.080	0.021	0.017	0.053
Latvia	0.070	0.000	0.000	0.000	0.032	0.006	0.008	0.002	0.051
Afghanistan	0.068	0.000	0.000	0.000	0.016	0.000	0.003	0.001	0.050
Senegal	0.068	0.000	0.000	0.000	0.022	0.012	0.007	0.003	0.050
Iceland	0.067	0.000	0.000	0.000	0.085	0.000	0.017	0.003	0.050
Cyprus	0.064	0.189	0.000	0.000	0.033	0.000	0.044	0.058	0.047
Brunei	0.063	0.000	0.067	0.000	0.031	0.013	0.022	0.024	0.046
Ethiopia	0.063	0.000	0.000	0.000	0.018	0.022	0.008	0.005	0.046
El Salvador	0.060	0.000	0.000	0.000	0.000	0.048	0.010	0.010	0.044
Cameroon	0.058	0.000	0.000	0.000	0.025	0.473	0.100	0.096	0.073
Bosnia & Herzegovina	0.056	0.000	0.000	0.000	0.023	0.000	0.005	0.001	0.041
Papua New Guinea	0.055	0.000	0.000	0.000	0.005	0.000	0.001	0.000	0.041
Nicaragua	0.055	0.000	0.000	0.000	0.018	0.044	0.012	0.009	0.040
Liberia	0.054	0.000	0.000	0.000	0.005	0.000	0.001	0.000	0.040
Honduras	0.052	0.000	0.000	0.000	0.018	0.048	0.013	0.010	0.038
South Sudan	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038
Madagascar	0.051	0.000	0.000	0.000	0.000	0.008	0.002	0.002	0.038
Estonia	0.051	0.000	0.000	0.000	0.020	0.000	0.004	0.001	0.038
Bolivia	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037
Turkmenistan	0.050	0.000	0.000	0.000	0.010	0.000	0.002	0.000	0.037
Mozambique	0.048	0.000	0.000	0.000	0.016	0.022	0.008	0.005	0.035
Gabon	0.045	0.000	0.000	0.000	0.029	0.383	0.083	0.078	0.061
Guinea	0.045	0.000	0.000	0.000	0.015	0.020	0.007	0.005	0.033
Georgia	0.044	0.000	0.000	0.000	0.021	0.000	0.004	0.001	0.032

Table 4. Financial Contributions to the Fund: Selected Indicators and Aggregate Measures – by Member (continued)
 (In percent)

	14th Review	Share in Financial Contributions to					Various Aggregate Measures		
		NAB with Rollback ^{1/}	Bilateral Borrowing Agreements ^{2/}	PRGT Loans ^{3/}	Concessional Financing Subsidies ^{4/}	Capacity Development ^{5/}	VFCS I ^{6/}	VFCS II ^{7/}	VFCS III ^{8/}
Sierra Leone	0.0435	0.0000	0.0000	0.0000	0.0142	0.0000	0.0028	0.0005	0.0319
Paraguay	0.0422	0.0000	0.0000	0.0000	0.0147	0.0000	0.0029	0.0005	0.0310
Botswana	0.0413	0.0000	0.0000	0.0000	0.1204	0.0184	0.0278	0.0079	0.0304
Namibia	0.0401	0.0000	0.0000	0.0000	0.0187	0.0184	0.0074	0.0043	0.0294
Mali	0.0391	0.0000	0.0000	0.0000	0.0128	0.0200	0.0066	0.0044	0.0287
Bahamas, The	0.0382	0.0000	0.0000	0.0000	0.0128	0.0406	0.1017	0.0086	0.0281
Guyana	0.0381	0.0000	0.0000	0.0000	0.0000	0.0332	0.0066	0.0066	0.0280
Kyrgyz Republic	0.0372	0.0000	0.0000	0.0000	0.0122	0.0000	0.0024	0.0004	0.0274
Cambodia	0.0367	0.0000	0.0000	0.0000	0.0125	0.0000	0.0025	0.0004	0.0270
Tajikistan	0.0365	0.0000	0.0000	0.0000	0.0119	0.0000	0.0024	0.0004	0.0268
Moldova	0.0362	0.0000	0.0000	0.0000	0.0169	0.0000	0.0034	0.0006	0.0266
Malta	0.0353	0.0000	0.0677	0.0000	0.0484	0.0000	0.0232	0.0220	0.0259
Haiti	0.0343	0.0000	0.0000	0.0000	0.0112	0.0184	0.0059	0.0041	0.0252
Somalia	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0252
Congo, Rep. of	0.0340	0.0000	0.0000	0.0000	0.0083	0.4955	0.1008	0.0994	0.0740
Rwanda	0.0336	0.0000	0.0000	0.0000	0.0110	0.0393	0.1010	0.0082	0.0247
Equatorial Guinea	0.0330	0.0000	0.0000	0.0000	0.2970	0.0000	0.0594	0.0594	0.0436
Nepal	0.0329	0.0000	0.0000	0.0000	0.0098	0.0000	0.0020	0.0003	0.0242
Burundi	0.0323	0.0000	0.0000	0.0000	0.0103	0.0650	0.0150	0.0133	0.0237
Togo	0.0308	0.0000	0.0000	0.0000	0.0101	0.0186	0.0057	0.0041	0.0226
Mauritius	0.0298	0.0000	0.0000	0.0000	0.0147	1.7260	0.3481	0.3457	0.2558
Macedonia, FYR	0.0294	0.0000	0.0000	0.0000	0.0095	0.0000	0.0019	0.0003	0.0216
Chad	0.0294	0.0000	0.0000	0.0000	0.0091	0.2190	0.4566	0.0441	0.0335
Albania	0.0292	0.0000	0.0000	0.0000	0.0059	0.0000	0.0012	0.0002	0.0215
Malawi	0.0291	0.0000	0.0000	0.0000	0.0093	0.0393	0.0097	0.0082	0.0214
Niger	0.0276	0.0000	0.0000	0.0000	0.0090	0.0000	0.0018	0.0003	0.0203
Suriname	0.0270	0.0000	0.0000	0.0000	0.0000	0.0258	0.0052	0.0052	0.0199
Armenia	0.0270	0.0000	0.0000	0.0000	0.0126	0.0000	0.0025	0.0004	0.0198
Mauritania	0.0270	0.0000	0.0000	0.0000	0.0088	0.0071	0.0032	0.0017	0.0198
Benin	0.0260	0.0000	0.0000	0.0000	0.0085	0.0122	0.0041	0.0027	0.0191
Burkina Faso	0.0252	0.0000	0.0000	0.0000	0.0083	0.0203	0.0057	0.0043	0.0185
Central African Rep.	0.0234	0.0000	0.0000	0.0000	0.0022	0.0740	0.0152	0.0149	0.0172
Lao P.D.R.	0.0222	0.0000	0.0000	0.0000	0.0073	0.0000	0.0015	0.0003	0.0163
Fiji	0.0206	0.0000	0.0000	0.0000	0.0115	0.0092	0.0042	0.0022	0.0152
Barbados	0.0198	0.0000	0.0000	0.0000	0.0116	0.0000	0.0023	0.0004	0.0146
Kosovo	0.0173	0.0000	0.0000	0.0000	0.0058	0.0000	0.0012	0.0002	0.0127
Swaziland	0.0165	0.0000	0.0000	0.0000	0.0002	0.0147	0.0030	0.0030	0.0121
Mongolia	0.0152	0.0000	0.0000	0.0000	0.0070	0.0000	0.0014	0.0002	0.0111
Lesotho	0.0146	0.0000	0.0000	0.0000	0.0041	0.0184	0.0045	0.0038	0.0108
Gambia, The	0.0130	0.0000	0.0000	0.0000	0.0043	0.0065	0.0021	0.0014	0.0096

Table 4. Financial Contributions to the Fund: Selected Indicators and Aggregate Measures – by Member (concluded)
 (In percent)

	14th Review	Share in Financial Contributions to				Various Aggregate Measures			
		NAB with Rollback ^{1/}	Bilateral Borrowing Agreements ^{2/}	PRGT Loans ^{3/}	Concessional Financing Subsidies ^{4/}	Capacity Development ^{5/}	VFCS I ^{6/}	VFCS II ^{7/}	VFCS III ^{8/}
Montenegro	0.01268	0.00000	0.00000	0.00000	0.00189	0.00000	0.00038	0.00007	0.00932
San Marino	0.01031	0.00000	0.00000	0.00000	0.00263	0.00220	0.00097	0.00053	0.00758
Eritrea	0.00767	0.00000	0.00000	0.00000	0.00000	0.03930	0.00786	0.00786	0.00578
Djibouti	0.00667	0.00000	0.00000	0.00000	0.00218	0.00000	0.00044	0.00008	0.00490
Guinea-Bissau	0.00595	0.00000	0.00000	0.00000	0.00195	0.00000	0.00039	0.00007	0.00437
Belize	0.00560	0.00000	0.00000	0.00000	0.00607	0.04056	0.00933	0.00832	0.00685
Timor-Leste	0.00537	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00394
Vanuatu	0.00499	0.00000	0.00000	0.00000	0.00167	0.0442	0.00122	0.00094	0.00367
Cabo Verde	0.00497	0.00000	0.00000	0.00000	0.00038	0.00000	0.00008	0.00001	0.00365
Seychelles	0.00480	0.00000	0.00000	0.00000	0.00150	0.02950	0.00620	0.00595	0.00456
St. Lucia	0.00449	0.00000	0.00000	0.00000	0.00218	0.02581	0.00560	0.00524	0.00411
Maldives	0.00444	0.00000	0.00000	0.00000	0.00124	0.00000	0.00025	0.00004	0.00327
Solomon Islands	0.00436	0.00000	0.00000	0.00000	0.00143	0.00000	0.00029	0.00005	0.00320
Bhutan	0.00428	0.00000	0.00000	0.00000	0.00086	0.00000	0.00017	0.00003	0.00314
Antigua and Barbuda	0.00419	0.00000	0.00000	0.00000	0.00132	0.02581	0.00543	0.00521	0.00399
Comoros	0.00373	0.00000	0.00000	0.00000	0.00122	0.00000	0.00024	0.00004	0.00274
Grenada	0.00344	0.00000	0.00000	0.00000	0.00000	0.02581	0.00516	0.00516	0.00379
Samoa	0.00340	0.00000	0.00000	0.00000	0.00120	0.00000	0.00024	0.00004	0.00250
São Tomé and Príncipe	0.00310	0.00000	0.00000	0.00000	0.00102	0.00000	0.00020	0.00004	0.00228
Tonga	0.00289	0.00000	0.00000	0.00000	0.00120	0.00000	0.00024	0.00004	0.00213
St. Kitts	0.00262	0.00000	0.00000	0.00000	0.00000	0.02581	0.00516	0.00516	0.00379
St. Vincent	0.00245	0.00000	0.00000	0.00000	0.00174	0.02581	0.00551	0.00522	0.00405
Dominica	0.00241	0.00000	0.00000	0.00000	0.00113	0.03318	0.00686	0.00668	0.00504
Kiribati	0.00235	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00173
Micronesia, FS of	0.00151	0.00000	0.00000	0.00000	0.00050	0.00000	0.00010	0.00002	0.00111
Marshall Islands	0.00103	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00075
Palau	0.00103	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00075
Nauru	0.00059	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00043
Tuvalu	0.00052	0.00000	0.00000	0.00000	0.00018	0.00000	0.00004	0.00001	0.00039

Source: Finance Department.

1/ All credit arrangements under the NAB that were effective as of end-September 2017.

2/ All effective 2016 BBAs and pledges to the 2016 BBAs as of end-October 2017.

3/ Cumulative loan commitments to the PRGT-ESF Trust as of end-September 2017.

4/ Total bilateral resources received or pledged since 1987 for subsidizing concessional lending, and HPC, MDRI and CCRT debt relief, as of end-September 2017.

5/ Cash contributions to the IMF for technical assistance and training (excluding in kind contributions), FY1999-FY2018Q1.

6/ Average of contribution shares in NAB, BBAs, PRGT loans, concessional financing subsidies, and capacity development.

7/ Weighted average of contribution shares with weights of 0.3 for NAB, 0.3 for BBAs, 0.2 for PRGT loans and concessional financing subsidies combined, and 0.2 for capacity development.

8/ Measure of "generous" contributions which uses the higher of 14th Review quota share or VFCS I share rebased to ensure that total shares add up to 100 percent.

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

February 7, 2018

The Chairman's Concluding Remarks
Fifteenth General Review of Quotas—Further Considerations
Committee of the Whole on Review of Quotas Meeting 18/1
February 2, 2018

Today's third meeting of the Committee of the Whole on the 15th General Review of Quotas builds on two earlier discussions on the adequacy of Fund resources and on the quota formula and realigning quota shares in September 2017. Directors welcomed the opportunity for a further informal exchange of views on these issues. Let me offer brief informal remarks that reflect my understanding of the views expressed in today's discussion.

Directors reiterated their shared commitment to a strong, quota-based, and adequately resourced IMF at the center of the global financial safety net. Many Directors again underlined that the issues of the quota formula and the size and distribution of any quota increase under the 15th Review are closely interlinked and will ultimately need to be agreed as a package. Many Directors also reaffirmed the view that IMF bodies should lead the process and determine the outcome, recalling that the work program agreed by the Executive Board calls for IMFC guidance on key elements of the 15th Review in the second quarter of 2018.

Directors underscored the importance of ensuring that the Fund has sufficient resources available to respond to actual, potential, or prospective financing needs in line with its mandate. They welcomed the additional analytical work on resource adequacy presented in the staff paper, which sought to respond to previous feedback. Directors appreciated the refinements to the quantitative models, with more conservative assumptions of the demand for Fund resources, although a number felt that they are still not sufficiently conservative. Most Directors also welcomed the longer-term perspective, noting that the outcome of the 15th Review will likely determine the Fund's permanent resources through at least the middle of the next decade, and that this perspective implies growing potential resource needs over time, as well as larger uncertainties. Directors appreciated the updated qualitative analysis, which gives more prominence to post-crisis reforms that could reduce the demand for Fund resources, while continuing to highlight factors that may increase such demand.

Taken together, most Directors agreed that the updated two-pillar approach provides a useful basis to advance discussions and help the membership form a judgment on the adequacy of the Fund's resources. Many Directors supported, or were open to, a quota increase that would at least maintain existing Fund resources after the bilateral borrowing agreements expire. Some Directors could support a larger quota increase that would restore the share of quotas in total resources to its long-term average. Some other Directors reiterated

their view that the Fund's current resources appear sufficient to handle a range of scenarios and hence to meet the needs of the membership over the medium term. A number of Directors called for clarification on prospects for a quota increase at an early stage, while a view was also expressed that it is premature to start deliberations on the need for a general quota increase at this stage. Many Directors noted that further clarification between normal circumstances and severe shocks would better inform the related resource needs of the Fund, while some others stressed that this is an issue of members' risk tolerance requiring political judgment.

Directors welcomed the further discussion of the Fund's resource composition and generally agreed that the traditional model of relying primarily on its permanent quota resources, supplemented by standing borrowing arrangements, has served the Fund well. The critical role played by the bilateral borrowing agreements as the third line of defense for the Fund to respond to the global financial crisis was also underlined. Going forward, many Directors argued that quotas should provide the bulk of its lending resources. A few Directors stressed that bilateral borrowing provides a flexible mechanism for boosting Fund resources and should continue to play a role when warranted by global conditions. A number of Directors reiterated that discussions on the adequacy of Fund resources should not pre-suppose future discussions on the possible renewal of bilateral borrowing agreements.

Views on the quota formula remained broadly unchanged. Most Directors reiterated that the four principles that underpinned the 2008 quota formula reform remain valid. Many Directors signaled their willingness to continue working toward a new formula that is broadly acceptable to the membership, building on the progress already made, including the outcome of the quota formula review (QFR) in 2013. A number of Directors noted that the quota formula is a valuable instrument to serve the goal of realigning quota shares. Many Directors reiterated that, in their view, the midpoint approach does not adequately represent the range of views being expressed and is not in line with the 2013 QFR, while some others considered the approach constructive and akin to the consensus reached on the 14th Review. Directors welcomed staff's additional work on the relationship between balance of payments difficulties and variability, and the convergence of market GDP and PPP GDP.

Directors reiterated the importance that quota shares be in line with members' relative positions in the world economy, with many Directors noting that overall out-of-lineness has increased significantly since the 14th Review. Many Directors called for a meaningful shift in quota shares from advanced economies to emerging market and developing economies during the 15th Review. A number of other Directors stressed that a realignment of quota shares should not be guided by a predefined target for a possible shift in shares for any particular group of countries.

Views remained divided on whether, and if so how, to take account of voluntary financial contributions. Many Directors supported, or were open to, taking account of such

contributions in quota adjustments under the 15th Review, with a few preferring their inclusion in the quota formula. Many other Directors continued to oppose such approaches.

Directors reiterated their commitment to protect the quota and voting share of the poorest members under the 15th Review. Views continued to vary on the precise definition of poor countries to be protected. Many Directors called for the protection of all PRGT-eligible members and also of small developing states. Some other Directors preferred a shorter list, limited to the poorest and based on either an update of the criteria used in the 14th Review or PRGT-eligibility.

Looking ahead, as Directors noted, considerable technical work has already been provided to inform Directors' views on the key issues for the 15th Review, and further progress will require important elements of judgment and compromise. Management and staff will reflect further on how best to take this process forward, and I remain encouraged by the shared commitment to work together in a constructive manner to complete the 15th Review in line with the agreed timetable.