# IMF: ill-tailored quotas

*The present discussions around IMF quotas may well reveal internal inconsistencies between the three purposes of the quotas: determine the financial contribution of each member country to the Fund, its access to Fund resources, and its voting rights. If the IMF is to find a new legitimacy as a co-ordinator of the global economy away from its traditional role of financial assistance, then deep changes in quota formulas would be appropriate, such as the inclusion of population in the formulas and the subsequent exclusion of variability and foreign exchange reserves. We provide illustrative projections of present and alternative quota formulas at the year 2030. There is little the Eurozone can do against a decline in its calculated quota share of at least 6 percentage points at this horizon. Excluding intra-Eurozone payments (consistent with a single seat at the IMF) would involve an additional 3 percentage point drop.*

IMF quotas are considered a strategic issue by many member countries since they determine financial contributions, access rights to IMF resources, voting rights[1] and, more generally, visibility and influence within the Fund. The quota issue has become especially topical in recent years, with low-income and emerging countries demanding a bigger say in the decision process.

The quotas are presently determined on the basis of country size, openness, instability of current receipts, and official reserves through a complex system of formulas set up in 1983 and subsequently complemented by *ad hoc* adjustments (see Box 1). Every five years, quotas are reviewed, leading to either general or selective quota increases. Last fall in Singapore, as part of the 13th quota review, an ad hoc increase of quotas was decided for four emerging countries – China, Korea, Mexico and Turkey – which were under-represented compared to their weights in the world economy. On that occasion, it was also decided to revise the formulas themselves during the 2007 annual meetings or, at the latest, during the spring 2008 ones. This revision meets the needs for the Fund to strengthen its legitimacy which has been under attack in recent years. The new system is bound to be simpler and more transparent, and to better reflect the positions of the various member states in the world economy.

The issue of quota formulas is not new. Already in 1999, a group of experts commissioned by the IMF Executive board and chaired by Richard Cooper had proposed to use a single formula based on GDP and on a measure of balance of payment instability. This proposal launched a lively discussion and intense work by Fund staff. The bottom line is that it is extremely difficult to produce a simple formula that does not lead to higher concentration of quotas in industrial countries, with even lower representation of low-income countries than it is presently the case. For instance, the aggregate quota share of Sub-Saharan African (excluding South Africa) is currently 4.56%. This figure may appear low compared to the population of the area (10% of world population). But it is high compared to the share of the sub-continent in world GDP, a mere 0.6%.

## ■ Quota formulas: purposes and content

IMF quotas serve three purposes:[2]

1. they determine the financial contribution of each member country;

2. they determine SDR allocation and members' access to Fund resources;[3]

3. together with basic votes (see Box 1), they determine the voting rights of member states in the Fund.

These three objectives clearly overlap. For instance, it is natural to grant large voting rights to large shareholders. However, the current willingness to raise the representation of developing countries in Fund's decisions (objective 3) partly contradicts the idea of large shareholders retaining the bulk of allocated quotas (objective 1). In addition, access to Fund resources (objective 2) is not constant over time and basically unpredictable .

1

1. Voting rights are not exactly proportional to quota shares due to basic votes. See below.
2. See International Monetary Fund (2006), Quotas – Further thoughts on new quota formula, mimeo, November 22.
3. Although in some cases (Asian crisis), the Fund provided financial assistance to some members irrespective of their quotas.

Proposals for formula revision all rely on GDP as the main measure of country size and it was decided in Singapore in 2006 that more emphasis should be put on this variable in the new formula. Indeed, GDP is consistent with the three objectives of quotas: a country with large GDP will have higher ability to contribute to the Fund (objective 1), higher needs in case of a crisis (objective 2), and higher legitimacy to weigh on Fund's decisions (objective 3).

It has sometimes been argued that GDP should be valued at purchasing power parity (PPP) exchange rates rather than current ones in order to better reflect size[4] and the future ability of member countries to contribute to the Fund.[5] Using PPP measures would help raising the share of developing and emerging countries. However PPP GDPs are plagued with measurement problems. In addition, the ability to contribute to the Fund is more likely to be indexed on GDP at current exchange rates than at PPP rates. Finally, empirical research on balance-of-payment crises generally shows that an overvalued exchange rate has a positive impact on the probability of crisis[6], hence on the probability of asking for Fund's assistance. Thus the needs for assistance from the Fund are likely to be indexed on current exchange rates. In order to increase the share of developing countries in the quotas and, more generally, the democratic legitimacy of the IMF, it would be more appropriate to rely on population rather than GDP. This possibility, advocated by Michel Camdessus[7] would better fit the idea of each individual having a say in global decision making, given that the consequences of ill-governance are suffered by each individual. Another possibility would be to distinguish objective 3 from objectives 1 and 2 by raising the

amount of basic votes. However, while basic votes can raise the voting share of very small countries, they are unable to redistribute voting shares across relatively large ones.[8]

*Openness* is currently included in all quota formulas, and generally contemplated in proposed formulas.[9] It is viewed as an indicator of member's involvement and stake in the global economy. It is presently based on current payments and receipts. Given the dramatic increase in capital flows compared to trade flows, it has been suggested to extend the notion of openness to capital flows. Measuring financial openness however raises three tricky questions: (i) use gross or net amounts; (ii) use flow or stock variables; (iii) include all financial flows (foreign direct investment, portfolio and "other") or only some of them. Net capital flows are a measure of saving-investment imbalances. It is not a measure of involvement in the global financial market, since two countries with the same current account may have different stakes in the world economy depending on gross inflows and outflows. However, using gross flows involves over-stating the quota of financial centres. In addition, although the extent of a member country's involvement in global financial markets depends on its asset and liability stocks rather than flows, data limitations suggest to use flows instead of stocks. Finally, though short-run capital flows are likely to be more disruptive than long-run ones, they include trade credit that is already included as exports and imports in the openness variable, and operations on derivative markets that may reduce the vulnerability of a member country to a financial crisis and/or lead to over-stating the quota of countries with a financial centre. On the whole, relying on gross FDI and

4. A. Mirakhor & I. Zaidi (2006), "Rethinking the governance of the International Monetary Fund", IMF *working paper* 273.

5. E.M. Truman (2006), "Rearranging IMF chairs and shares: the sine qua non of IMF reform", in Truman, E.M., ed., *Reforming the IMF for the 21st Century*, Institute for International Economics, Special Report 19, Washington CD.C.

6. See, for instance, A. Berg & C. Patillo (1999), "Are currency crises predictable? a test", IMF *Staff Papers*, 46 (2).

7. M. Camdessus (2005), *International financial institutions: dealing with new global challenges*, Washington: Per Jacobsson Foundation.

8. See M. Skala, C. Thimann & R. Wölfinger (2007), "The search for Columbus', egg: finding a new formula to determine quotas at the IMF", *ECB Occasional Paper*, July. In the following, we focus on quota shares, not voting rights.

9. The "Cooper" formula is a major exception. See R.N. Cooper & E.M. Truman (2007), "The IMF quota formula: Linchpin of Fund reform", *Policy Briefs in International Economics*, Peter G. Petersen Institute for International Economics.

portfolio outflows and inflows constitutes an acceptable compromise.

It has been suggested that intra-Eurozone flows should be removed from the calculation of the area's quota because those flows are not going to trigger any balance-of-payments crisis. The resulting drop in the Eurozone's share would leave room for less developed countries to reap higher shares. This scheme would be consistent with a single representation of the Eurozone at the IMF through a single constituency. Advocates of a Eurozone single seat argue that the drop in the voting share would be over-compensated by the co-ordination of Eurozone voices.[10]

*Variability* (as defined in the Box 1) is included in quota formulas in order to capture the vulnerability of member countries to balance-of-payment crises, hence their potential borrowing needs. This variable is viewed as a complement to openness since some relatively closed economies (say, Brazil) may nevertheless be vulnerable to crises due to the instability of current receipts and of capital inflows.

To stay consistent with the openness variable, variability should include the instability of capital flows. However the variability of capital inflows may not correctly measure the vulnerability of a country, if inflows and outflows are positively correlated. Hence it has been suggested that variability be calculated on the sum of current receipts and net capital inflows. In fact, this may not make a great difference compared to the present definition.[11]

More fundamentally, weighing variability in the quota formula amounts to "rewarding" member countries whose policies are inappropriate, leading to high instability. This problem points to some inconsistency between objective 2 (the needs for Fund's financings) and objective 3 (the say in IMF decisions), with possible moral hazard for large countries. The same kind of problem arises in the case of *foreign exchange reserves*, which are included in existing quota formulas because they represent the ability of a member country to contribute to the Fund (objective 1). But large reserves can also be viewed as a protection against currency crises, reducing the needs to ask for financial assistance from the Fund (objective 2). More importantly, excess reserve accumulation is often viewed as one cause of currency disorders and should not be encouraged.

## ◼ The quota battle: when and where?

The process of formula revision is evidently a long and complicated one, since most countries wish to have a higher quota share whereas by construction some will have to accept a decline. Once agreed on, the new formula(s) will unlikely be reconsidered for a long time. Meanwhile, GDP and trade flows will increase steadily in fast-growing countries at the expense of the "old world." Hence, it is useful to adopt a forward looking approach when comparing the impact of different formulas. This point is illustrated in Table 1. The first column reports actual quota shares in 2007. The second one shows calculated quota shares based on the present system of formulas described in Box 1 and on the statistical information for year 2001. There are relatively large discrepancies between calculated and actual quota shares. Specifically, the United States and Russia appear over-represented compared to calculated quota shares, whereas the Eurozone and Japan are under-represented. Despite the Singapore ad hoc adjustment of 2006, China and Korea are still under-represented. The last column reports projected quota shares for year 2030 based on a neo-classical growth model coupled with CGE projections of trade and FDI plus some assumptions concerning variability and official reserves.[12] Strikingly, the present system leads the US calculated quota share to almost double from 2001 to 2030, and that of China to triple. In contrast, the share of the Eurozone falls by 10 percentage points over the period (to less than half the share of the United States) and that of Sub-Saharan Africa (SSA hereafter) fails to increase.[13]

Table 1 – Projected quota shares based on present formulas

| % | Actual shares in 2007(a) | Calculated shares | |
|---|---|---|---|
| | | 2001 (base year) | 2030 |
| USA | 17.08 | 16.4 | 30.2 |
| Japan | 6.12 | 7.8 | 10.6 |
| Eurozone | 22.78 | 23.3 | 13.5 |
| France | 4.94 | 4.0 | 2.7 |
| Germany | 5.98 | 6.2 | 3.8 |
| UK | 4.94 | 4.5 | 3.6 |
| Korea | 1.35 | 1.9 | 3.9 |
| Mexico | 1.45 | 1.6 | 1.1 |
| China | 3.72 | 4.6 | 15.2 |
| Brazil | 1.40 | 1.3 | 0.8 |
| India | 1.91 | 0.9 | 3.3 |
| Russia | 2.73 | 1.1 | 1.4 |
| SSA(b) | 4.56 | 0.8 | 0.7 |

(a) *Source*: IMF (2006). Accounting for the Singapore ad hoc increase in quotas for China, Korea, Mexico and Turkey. (b) Sub-Saharan Africa, excluding South-Africa.
*Source*: Bénassy-Quéré *et al.* (2007).

These benchmark results can be compared with those obtained with different variants of a simple formula based on GDP and on openness (Box 2). The results are reported in Table 2. In its basic version (Column (3)), this "GDP" formula is less favourable than the present system for the United States, China and India, while being more favourable to the euro area. The two calculations lead to similar results for Japan and SSA.

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10. L. Bini-Smaghi (2006), "IMF Governance and the Political Economy of a Consolidated European Seat", in Truman, E.M., ed., *Reforming the IMF for the 21ˢᵗ Century*, Institute for International Economics, Special Report 19, Washington CD.C.
11. See L. Dos Reis (2005), "Measuring vulbnerability: capital flows volatility in the quota formulas", in Buira, A., ed., *Reforming the Governance of the IMF and the World Bank*, London: Anthem Press.
12. See Bénassy-Quéré *et al.* (2007), IMF Quotas at Year 2030, *CEPII Working Paper*, n° 2007-12.
13. This scenario should be only considered as illustrative, especially since the United States have announced that it would not seek for a higher quota share compared to the present situation which already grants it with a veto right even for those decisions requiring a 85% majority.

It has been suggested to "compress" the formula in order to reduce the concentration of quota shares in large, wealthy countries.[14] Column (4) shows that compression does reduce the share of large OECD countries, to the benefit of India and SSA countries (and other countries not reported in the table). However the increase in less developed countries quota shares remains limited, with SSA totalling a mere 1% in 2030. In Column (5), FDI and portfolio flows are included in the calculation of openness, with little impact compared to the previous column, except for a slight increase in European and Chinese shares. Column (6) removes intra-Eurozone flows from the calculations. This leads to an additional 3 percentage point drop in the Eurozone share, but the zone's share in 2030 remains higher than with the present system of formulas. In Column (7), GDPs are converted into US dollars at PPP instead of current exchange rates. This leads to an increase in quota shares for less developed countries. The Chinese share is higher than that of the Eurozone in 2030, while the Indian share overtakes the German one. However the impact on SSA remains limited. The last column of the table reports the results when population is substituted for GDP in the formula. This leads to a dramatic drop in the US, Japanese and Eurozone shares (which are all below 10% in 2030) whereas the share of India reaches 9.4% and that of SSA rises to 7%.

Although these scenarios should be considered with great caution given the heroic assumptions they are derived from, they provide useful benchmarks. Specifically, they show that there is little the euro area can do against a drop in its aggregate quota share by at least 6 percentage points. In this framework, the single Eurozone seat would provide a co-ordination device for otherwise dispersed Eurozone voices, which needs to be weighed against an additional 3 percentage point drop in the aggregate quota share if intra-zone trade flows are to be excluded. The simulations also show that the only way to significantly raise the quota share of less developed countries (apart from basis votes) would be to include population in the formula. Finally, in all cases China would at least double its quota share and be, at least, on equal footing with Japan in 2030.

Table 2 – Projected quota shares with present and "GDP" formulas

| | Actual quota share in 2007(a) | Present formulas 2030 | "GDP" formula 2030 | | | | PPP | "POP" |
|---|---|---|---|---|---|---|---|---|
| | | | Compressed | | | | | |
| | | | | | Including financial flows | | | |
| | | | | | | Excluding intra-Eurozone flows | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| USA | 17.08 | 30.2 | 25.8 | 20.7 | 20.7 | 21.2 | 20.7 | 9.0 |
| Japan | 6.12 | 10.6 | 10.9 | 7.9 | 7.8 | 8.0 | 5.8 | 2.9 |
| Eurozone | 22.78 | 13.5 | 20.1 | 17.1 | 18.1 | 15.4 | 15.6 | 8.7 |
| France | 4.94 | 2.7 | 4.0 | 3.1 | 3.2 | 2.8 | 3.0 | 1.7 |
| Germany | 5.98 | 3.8 | 5.8 | 4.5 | 4.7 | 4.1 | 4.3 | 2.4 |
| UK | 4.94 | 3.6 | 4.8 | 4.1 | 4.2 | 4.5 | 3.7 | 1.9 |
| China | 3.72 | 15.2 | 8.0 | 7.8 | 10.8 | 11.0 | 17.4 | 17.8 |
| India | 1.91 | 3.3 | 1.7 | 2.7 | 2.6 | 2.6 | 5.3 | 9.4 |
| SSA | 4.56 | 0.7 | 0.7 | 1.0 | 1.0 | 1.0 | 1.3 | 7.0 |

(a) *Source*: IMF (2006).  (b) Sub-Saharian Africa, excluding South Africa.
*Source*: Bénassy-Quéré *et al.* (2007).

On the whole, the present discussions around IMF quotas reflect existing inconsistencies between the three purposes of the quotas – contribution to the Fund, access to resources, voting rights – not to mention the design of good policy incentives for member countries. The declining role of the Fund as a provider of financial assistance may have contributed in moving the focus to the third purpose at the expense of the first two. If this is the case, a deep change in the formulas, such as the inclusion of population and the dropping of variables that risk producing wrong incentives, such as variability or reserves, may deserve some attention.

*Agnès Bénassy-Quéré*
agnes.benassy@cepii.fr

4

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14. Another justification is to correct for GDP and "openness" to be positively correlated.