

# IMF Working Paper

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## Global Economic Governance: IMF Quota Reform

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**IMF Working Paper**

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**Abstract**

The paper examines the principles on which a reform of a Quota based global economic institution like the IMF must be based, taking account of both the relative economic power of countries and the need for voice and representation of the poor countries. These principles are then used in the context of the global economic realities of the 21<sup>st</sup> century to examine the suitability of different variables in the IMF's Quota formula. Based on this analysis a simple transparent formula is suggested, which will help increase the credibility and legitimacy of the IMF as a global macroeconomic and financial institution.

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## Introduction

Major changes have taken place in the Global economy since the IMF was set up to promote international monetary co-operation, balanced growth of trade and payments, exchange rate stability and orderly BOP adjustments. These changes have accelerated since the 1980s. How much progress has IMF made in Governance and Quota Reform? The answer depends on the Benchmark one uses to measure progress. The less ambitious benchmark is to compare the reform in the last three and a half years with those in the preceding three and a half years. According to this benchmark important progress has been made. In our view a more appropriate benchmark is the gap between the power structure in the IMF and that in the Global economy. As the relative position of different countries in the world economy is changing even more rapidly than the pace of efforts to reflect it in the IMF quota and governance structures, the gap between the two has widened (instead of closing).<sup>2</sup> On this benchmark, reforms have been insufficient. The fact that a third quota reform had to be launched even before the ink was dry on the second reform (of 2009) is testimony to the fact that changes in the World economy are outpacing our attempts to reflect them in the governance structure of International Financial Institutions.

The current paper lays out a set of *objective principles* for determining the relative power and voice of different countries in a quota based global economic and financial institution.<sup>3</sup> The basic principle presented in the paper is that surrender of decision making power to the IMF involves surrender of sovereignty and quota shares must give primacy to economic variable(s) that reflect this sacrifice. This is essential for making and evenhandedly applying rules to all members, rich and poor, large and small. Two other supplementary principles are Incentive compatibility and simplicity. Incentive compatibility requires that the IMF advice on broad policy issues and the incentives inherent in the quota formula be mutually consistent. Absent this neither is the IMF's advice credible nor is the governance structure acceptable to all. A simple and transparent formula will enhance credibility. Complicated formulas and revisions often leave a suspicion that the existing powers in the institution are pulling strings behind the scenes, even though they help in facilitating compromise among numerous divergent interest groups. These principles are used to analyze the existing IMF quota formula and other proposed variables in formula and to come up with a simplified formula. It also suggests a way to translate the principle of selection of heads of global financial institutions on "merit without regard to nationality," into practice. These changes it is hoped would improve the legitimacy and credibility of the institution and therefore allow it to play a greater global role in promoting and sustaining growth and economic stability

The paper starts by setting the backdrop of the changes in World Economy in terms of trends that have been increasingly clear since the start of this century. It then explores briefly the effect of the financial crisis (section 2). Section 3 starts from the mandate of the IMF and its potential expansion in the light of the recent crisis. It then links this potential expansion

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<sup>2</sup> Besides the Quota and vote shares, governance issues arise at four levels: IMFC (e.g. ministerial engagement), Executive Board (e.g. representation, voice), Management (e.g. selection procedure) and Staff (e.g. diversity).

<sup>3</sup> See Mirakhor and Zaidi (2006) for an earlier formulation of, "principle issues" for IMF governance reform.

of the mandate to the principles on which such a mandate must be based to have any chance of effective global governance. As the IMF is a quota based organization, the foundation of any reform must therefore be a quota formula that reflects these principles in the globalised world of the 21<sup>st</sup> century. This section also touches on the three objectives (Vote share, Resources, Access) that the formula originally filled. One of these (access), has already been effectively delinked from the quota with IMF loans unconstrained by quota contribution. This section also considers further why resource contribution should not be an additional variable in the formula, in an institution in which the quota constitutes equity contribution and effectively reflects voting rights and share in governance.

This is followed in subsequent sections by a discussion of the different variables in the current formula and their weakness and applicability under current and emerging reality and also some new variables. These include GDP (section 4) and the contribution of countries to global growth (section 5), Openness and net contribution to global demand (section 6) and Variability and Voice and Representation of people (section 7). Section 8 summarizes and concludes the discussion.

## **1. Global Economic Trends and Financial Crisis**

The global crisis in 2008 has, accelerated the trends in the relative size and power of countries that were presented in Virmani (2004, 2005). It has however thrown up a few new issues that are useful to note as they affect perceptions of different countries and how they act in the global context. We briefly consider these before presenting the projected trends in the relative size of major economies.

The financial crisis in the US and Europe and the consequent recession and growth slowdown in the Advanced Economies (AEs) has had a dramatic effect on the relative fiscal position of Emerging markets and Developing countries (EMDCs) and AEs. In the pre-crisis period the fiscal problem was viewed mainly as a problem for developing countries, while in the post-crisis period it is also a problem of the advanced economies.<sup>4</sup> This fiscal situation will in turn constrain economic policy and economic growth (e.g. Euro area, UK, USA). The second, more general impact of the crisis is that World growth and the growth of World Trade in the post crisis decade (and a half) will be much slower than it has been in the pre-crisis decade (and a half). Particularly among the EMDCs, export oriented economies (e.g. China) will lose relative to the domestic demand led/export neutral ones (e.g. India), even though the former's growth relative to the USA may be the same as before the crisis, i.e. they both slow in the same proportion. The export oriented economies will therefore have to change their growth model to sustain growth at the same relative levels as before. In contrast, the domestic demand led economies will only have to sustain their reform pace and in some cases speed it up a little, to grow at pre-crisis rates, which would be higher relative to the post-crisis growth rate of the US economy (the benchmark for relative growth). Finally the energy rich/oil rich economies will after a short dip to compensate for the pre-crisis bubble in growth, return to the underlying pre-crisis trends (e.g. Brazil, Russia).

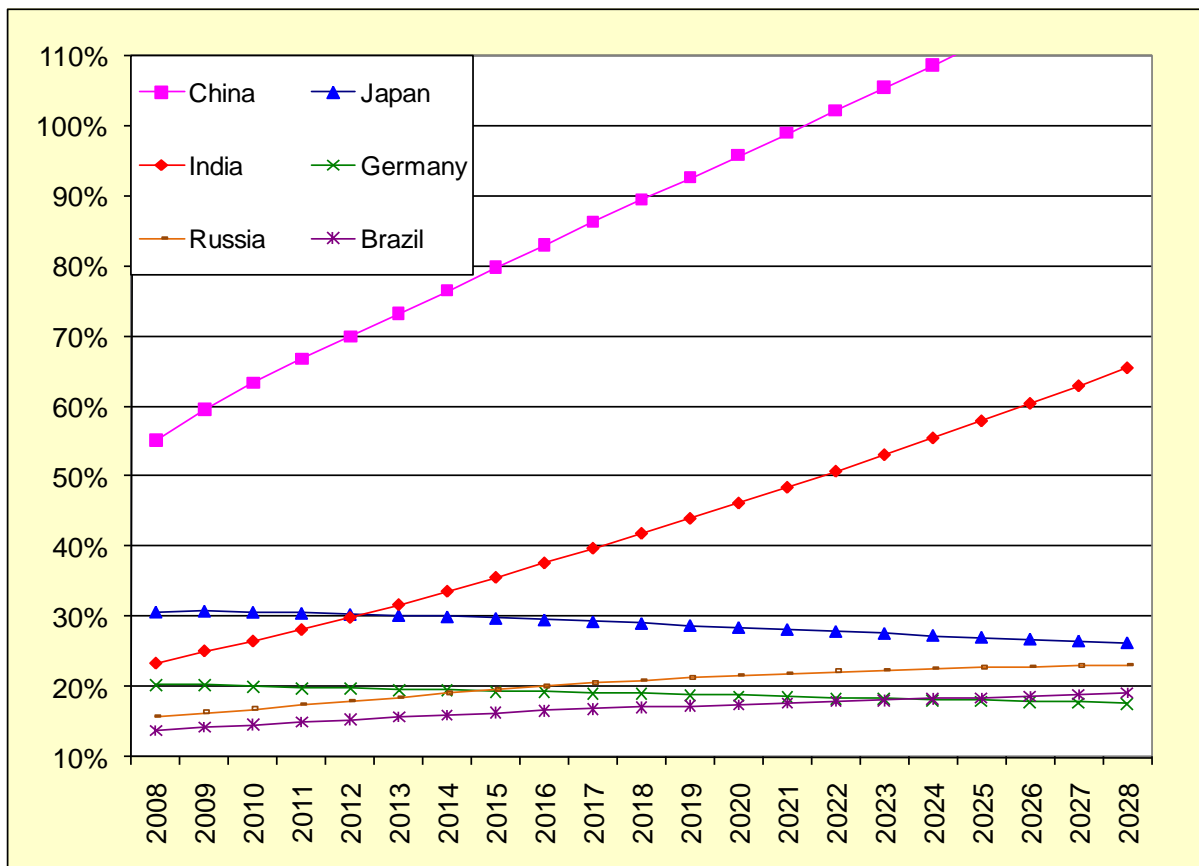
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<sup>4</sup> See Prasad and Ding (2011) for estimates.

The real size of any country is its GDP in Purchasing Power Parity terms (GDP PPP) as discussed in Heston (2004) and Virmani and Patra (2011). In 2010 the five largest economies were the USA with 19.7% of aggregate world GDP, China with 13.6%, Japan with 5.8 %, India with 5.5% and Germany with 4.0% of aggregate world GDP (WEO, June 2011 update). The next ten were Russia(3%), UK(2.9%), Brazil(2.9%), France(2.9%), Italy(2.4%), Mexico(2.1%), Korea(2.0%), Spain(1.8%), Canada(1.8%) and Indonesia(1.4%).

Charts 1 and 2 show the trends in the size of economies relative to that of the USA the largest economy. These represent revised projections after the global crisis. China's real GDP will equal that of the USA around 2022 (chart 1). These trends indicate clearly that the Indian economy will become much larger than the major European economies and Japan during the next decade, just as China has in the last decade.<sup>5</sup>

**Chart 1: Trends in Real Economic Size of Large Countries relative to the USA**



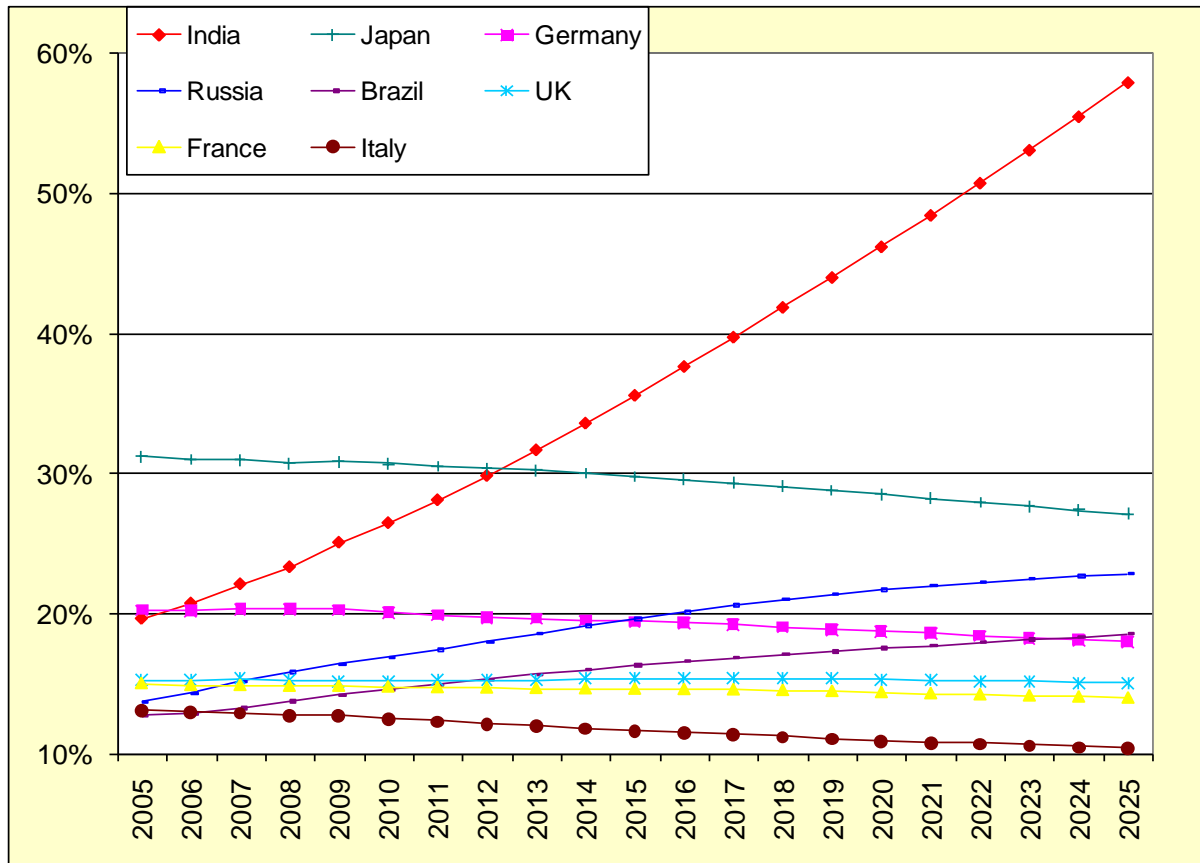
Source: Virmani (2009) updated by author.

Chart 2, brings out more clearly the trends in the relative size of India, Japan and other large countries. In particular the Indian economy was projected to become larger than

<sup>5</sup> Trends in the relative size of economies post crisis are virtually the same as in Virmani (2004, 2005), except that China's rise is slower and India's is faster, by a few years.

Japan's and to be twice the size of Germany before the end of the current decade. Demography is an important factor in the long term trend (relative) decline of Japan, Germany, Italy and Russia.<sup>6</sup> There will also be an increase in size of dynamic emerging economies (e.g. Indonesia) and of Low income and Middle income countries as a whole.<sup>7</sup> An implicit assumption underlying these projections was that global shocks will have a proportional effect on countries and will therefore not materially affect their relative position. Given the uncertainty in any economic forecast, however, it is more important to focus on the broad trends rather than on specific value of GDP PPP of any country in a particular year.

**Chart 2: Economic Size of Select Countries relative to USA**



Source: Virmani (2009) updated by author.

Based on the latest available IMF data and projections for different countries, we estimate that in 2011 the projected country GDP shares would be as follows: USA (19.5%), China (12.1%), India (5.7%), Japan (5.6%), Germany (3.9%), Russia (3.0%), Brazil (2.9%),

<sup>6</sup> These projections for Brazil and Russia are higher than in Virmani (2005) because of the oil /energy price boom of 2008. They continue to have a higher degree of uncertainty than for others because of uncertainty over oil prices.

<sup>7</sup> See Virmani (2005b) on Indonesia forecast and reasoning.

UK (2.9%), France (2.8%) and Italy (2.3%).<sup>8</sup> India will thus become the third largest economy in the World by the end of the current year, with GDP at PPP marginally greater than Japan's.

## **2. IMF Mandate, Governance Principles and Quota Formula**

Issues of Global governance of the International Financial Institutions such as the IMF have moved centre stage since the eruption of the Global financial crisis in 2008. It is not clear how many decision makers and their parliament/legislature/Congresses have learnt the lessons of the crisis. Many analysts and academics, who have learnt some of the lessons, advocate an expanded mandate and role for the IMF. As it stands, Article IV, section 3(a) of the IMF's articles of agreement states that, "The Fund shall oversee the international monetary system in order to ensure its effective operation and shall oversee the compliance of..." The quoted mandate can be interpreted either as being all encompassing or as very limited! In general those who control the governance structure of the fund tend to favor the former interpretation, while those who feel they have an unfairly low share of quotas and governance tend to favor the latter interpretation. Thus the issue of expanded mandate is intimately related to quotas and governance issues.

The Global crisis has led many analysts to conclude that the IMF's mandate needs to be expanded from Balance of Payments and exchange rates to the real economy (saving-investment imbalances) and to issues relating to global financial stability. Some of the relevant lessons are that real and monetary-financial elements of even developed economies are not separable to the extent that the prevailing orthodoxy based on the "rational expectations theory" had imagined. The earlier orthodoxy, that financial markets are (almost) as self-stabilizing as markets for goods and services has given way to a more realistic appraisal of their unstable properties and negative spillovers (externalities). Consequently the objective of ensuring financial stability is now recognized as much more important for individual countries as well as the global economy. Therefore it is necessary to deal with both global financial imbalances and global real imbalances (besides much better regulation) if we want to minimize future global financial crisis.

### *Quota Formula: Incentive Compatibility*

Ultimately income, employment etc are all real variables that we all care about. Financial, monetary aspects are merely instruments/tools for achieving real objectives including stability in income, employment and not just inflation control (as the monetary fundamentalists thought)! The implication for the quota formula is that real variables must have predominant weight in the formula. An additional lesson of the Global financial crisis is that the traditional linear thinking that deficits are bad and surpluses are good and the more

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<sup>8</sup> The projected shares for the next 10 economies by size will be Mexico(2.1%), S Korea(2.0%), Spain(1.8%), Canada(1.8%), Indonesia(1.4%), Turkey(1.3%), Australia(1.2%), Taiwan-China(1.1%), Iran(1.1%) and Poland(1%).



the surplus the better, needs to be modified at a global level. An excess of both surplus and deficit can increase the potential for global instability. Too much of a good thing can be bad (have negative consequences) for a country and/or the world, whether it is exports, capital inflows, reserves, current account surplus, capital account surplus or fiscal surplus. A large financial sector that underpins asset bubbles and large volatile capital flows can be highly destabilizing for the World economy. Thus such linear thinking, which also underlay the quota formula at its inception, needs to change fundamentally.

The quota formula must be revised to take account of these imbalances and the technical-professional advice that the IMF is giving to various countries: Neither subsidize exports nor tax imports. Do not peg exchange rate at an undervalued level to raise exports or lower imports. Limit reserves to „optimal“ levels and not maintain „excess“ reserves. The existing quota variables such as “openness” and “reserves” and the „market exchange rate“ (a fundamental component of GDP MER), are inconsistent with the policy advice that IMF gives. Without such a change, neither IMF advice is credible nor is the formula a legitimate measure of the importance of a country in the new World economy!

### *Principles of Global Governance*

In trying to define the principles that may apply to global governance, it is useful to start with the widely accepted principles of domestic governance, that of one person one vote. This in turn rests on some version of the principle that “All human beings are created equal.”<sup>9</sup> An essential difference between domestic governance and global (economic) governance is that the latter involves the partial surrender of sovereignty over (economic) decisions to the global organization, such as the IMF. The larger the autonomy a country enjoys in the global economic arena the larger the sacrifice it makes in subjecting itself to any global rule that curtails/limits its sovereign decision making power.

A country’s size is the most important natural determinant of the economic power and autonomy of economic decision making in a global context. Therefore if large countries are to surrender any part of their decision making power to collective decision making power, they must be convinced that they have objectively fair share in the quota and governance of the institution. These countries, whatever they may say to the media and the public, will not surrender or do so willingly and wholeheartedly, unless they get at least a proportionate vote share in the global institution to which they surrender this power! If they are forced to do so under some kind of pressure, they will try to undermine, non-transparently, the application of such rules to themselves. It is only fair and just that they do get this share in both the rights and responsibilities of global power. Thus a global financial institution can only be legitimate and credible if its vote share and governance structure reflects each countries’ share in the world economy and it applies its rules (accepted globally) evenhandedly and transparently to all countries, big and small, rich and poor.

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<sup>9</sup> See Virmani (2004) for a discussion of why this principle is superior to the Westphalian dictum of one country one vote and an exploration of Global organizations in which this principle should apply and how.

### *Quota Formula*

$$\text{CQS} = (0.5*Y + 0.3*O + 0.15*V + 0.05*R)^k$$

CQS = Calculated Quota Share; Y = GDP: A blend of GDP converted at market rates and PPP exchange rates averaged over the immediate three year period for which data are available, with weights of 0.60 and 0.40, respectively;

O = Openness: The annual average of the sum of current payments and current receipts (goods, services, income, and transfers) for the latest five year period;

V = Variability of current receipts and net capital flows (measured as a standard deviation from the centered three-year trend over the recent thirteen year period);

R = twelve month average over a year of official reserves (foreign exchange, SDR holdings, reserve position in the IMF and monetary gold).

k = a compression factor of 0.95;

The IMF uses a quota formula to guide the assessment of a member's relative position. The current quota formula is a weighted average (40%-60%) of gross domestic product (GDP) based on market exchange rates (MER) and GDP based on purchasing power parity (PPP) (weight of 50 percent), openness (30 percent), economic variability (15 percent), and international reserves (5 percent). The formula also includes a “compression factor” that reduces the dispersion in calculated quota shares across members.

Traditionally these variables have been chosen to reflect the multiple roles that the quota formula was designed to reflect: Vote share, Resource contribution and Access to loans (Cooper and Truman (2007)). New IMF facilities such as FCL and recent loans to European countries that are more than 40 times quota have already delinked access from the quota. These developments also show that both the potential demand for loans and the contribution of quota resources are correlated to size. The second issue is whether financial contribution made by members should be reflected in their quota and vote. The IMF is not an Aid organization like the World Bank, IDA, designed to give grants and transfers to poor countries. It is a *quota based organization* in which the equity resources are supposed to be contributed by shareholders.<sup>10</sup> The *level* of aggregate quota contribution can be adjusted to the resource needs of the IMF, but should not affect quota *shares* or the formula for determining them. If some countries do not have the resources to subscribe up to their eligible contribution, they can choose not to do so, thus reducing their vote share relative to all those who contribute up to the extent of their eligible share allocation.<sup>11</sup> The debt that the IMF raises in global capital market, on the strength of its equity, is remunerated at market rates and returns. It is neither a favor that the country does for the IMF nor vice versa.<sup>12</sup> There is no case for inclusion of past financial contributions to the IMF, in the quota formula.

<sup>10</sup> These equity resources earn a return that is close to the risk free return in global capital markets.

<sup>11</sup> It thus ipso-facto increase the actual relative share of the rest of the members who contribute fully.

<sup>12</sup> If special grant funds are set up for specific purposes for which the rich countries want to contribute to the poor they can logically ask for a higher vote share with respect to financial policies/decisions relating to these funds, but not the overall IMF governance structure!

We will consider the validity and usefulness of the variables in the quota formula in the light of the principles outlined earlier and the changes in the World economy.

### *Averaging of Variables*

At the most elementary level the logic of averaging GDP PPP over three years is flawed. The general argument for three/five year averaging rests on high exogenous volatility in the variable. For instance many countries in which agricultural production fluctuates sharply with monsoon rains use 3, 4 or 5 year averaging to smoothen out the agricultural production series. By definition and construction GDP PPP measures the real size of an economy, which fluctuates very marginally compared to variables such as inflation and exchange rate that influence the value of GDP MER. Thus averaging of GDP PPP serves merely to dilute and minimize the effect of changing reality on the quota. Further even in the case of GDP MER, it is the market exchange rate which fluctuates randomly and often arbitrarily (due to capital movements). Thus it would be better even in this flawed formula, to use the latest estimate of the GDP in domestic currency, and convert it to USD by using the average nominal market exchange rate (MER) for the last few years to calculate the GDP MER.

### **3. Gross Domestic Product (GDP)**

#### *GDP: PPP vs. MER*

The degree of autonomy a country enjoys in the international economy depends on its economic power. Economic power is in turn directly and strongly related to economic size (see Virmani (2006) for details). The economically appropriate way to measure the real size of an economy is in purchasing power parity. The conceptually appropriate way to compare any quantity across countries whether absolute values ( $Y$ ,  $y=Y/P$ , Exports, Imports) or ratios of two quantities ( $I/Y$ ,  $X/Y$ ,  $M/Y$ ) is to first determine their purchasing power parity (see Heston (2004), Virmani and Patra (2011)). Thus the quota formula must give a predominant role to relative economic size or a countries share in aggregate world GDP in determining quota shares of countries.

In practical (reduced form) terms the difference between GDP PPP and GDP MER can be thought of as a difference between the Exchange rate of the local currency (LC -rupee say) and the US dollar, either PPP or MER, applied to the GDP measured in LCUs (rupees) to convert it into a common metric, the international dollar or US dollar respectively. While the market exchange rate tells us merely how many dollars you can get for 100 LCUs/rupees, the PPP exchange rate tells us the real value of the goods and services that can be purchased. Thus 100 rupees will get you a little over US\$2 at MER, but it can purchase in India real goods and services equivalent to what US\$6 would purchase in the USA. Thus the MER under-estimates the real size of the Indian economy and that of all other Low and Lower-

middle Income countries and thus benefits (in terms of quota/vote shares) the richer countries (HICs) at the cost of the poorer ones (LICs).<sup>13</sup>

### *Past or Future*

Another problem of quota reform is that the data used in the formula is a year old and by the time a reform is approved and implemented it is about three years old. One way to solve this problem would be to project the variables forward to the anticipated time of implementation. However, there is unlikely to be wide acceptance of any projection method no matter how objective! In this context, the use of GDP PPP has the additional advantage that the ratio of GDP PPP to GDP MER is a good predictor of future growth. This is consistent with the theory of catch-up growth and the growth convergence hypothesis: The less prosperous economies (i.e. those for which the PPP valuation of GDP is relatively greater than market exchange rate GDP) should grow faster over the subsequent decade than more prosperous economies. This can be seen by plotting the initial ratio of GDP PPP to GDP MER (in 2000) against the average growth rate during the subsequent decade (i.e. the 2000s) for IMF member countries with required data (152).

**Chart 3: Gdp Ppp/Gdp Mer as Predictor of Growth**



Source: Author's calculations based on WEO data base (152 countries).

<sup>13</sup> This is the real political economy of GDP, not withstanding rich countries' concern for poverty in sub-Saharan Africa and/or the size of their Foreign Aid budgets.

The strong positive relationship between real GDP growth during the decade of the 2000s and initial ratio of GDP at purchasing power parity to GDP at Market exchange rates is illustrated in chart 3. GDP PPP is not only the appropriate measure of the relative size of economies, but it also captures to some extent the future growth potential. It is therefore a more forward looking measure and is unlikely to become outdated in the period between reaching an agreement on quota reform and its implementation.

*The 'Monetary' in IMF: GDP MER ?*

Bryant (2010, 2004, 2003) has argued that the IMF is a Monetary and Financial institution, and a quota formula determining its governance structure must give due weight to financial variables such as size of financial assets and cross-border holdings of the same. He then goes on to argue that as direct measures of assets and wealth are not available for most countries, GDP at Market Exchange Rate (MER) is the best available proxy and must therefore be a part of the IMF's Quota formula.

In the context of the principle of autonomy and sovereignty outlined above, it can be argued that a country's autonomy of action in the global economy is related both to its real GDP and its real wealth. However, total wealth consists of claims over real assets or capital. Domestic capital is already part of the (conceptual) aggregate production function that determines the country's production of real goods and services and is therefore captured by the real GDP variable (i.e. GDP at PPP).

What about cross-border holdings of financial and other assets? Firstly, these are a small fraction of total capital not only in world aggregates but even in the richest capital exporting countries. Secondly, Money and financial assets in general are a store of value. The value of „money“ like the USD, Yen or Pound, is the quantity of Goods and Services it can buy in the home country. Thus the relative value of different monies (e.g. stock of money in USA vs. stock of money in Japan) can only be compared if we use the PPP exchange rate to convert them to a common metric. The same applies to stocks of Assets (denominated in different currencies). The use of a market exchange rate (MER) is a theoretically and empirically flawed conversion factor than the PPP exchange rate. So even in this case, the GDP measured at Purchasing power parity (PPP) is a better proxy for the real relative value of Money (compared to GDP at Market exchange rate). As data for cross-border holdings of financial and other assets are available for a very limited set of countries and are much less reliable than for GDP, a proxy has to be used. To the extent that GDP MER can be shown to be correlated to real cross border wealth holdings, it could be included in a GDP blend (though there is little evidence to this effect so far):<sup>14</sup> In this case the upper limit of the GDP MER proportion in the GDP blend would be the ratio of World cross border capital (real) holdings to total world capital stock.<sup>15</sup>

Based on the latest available data (and individual country projections by the IMF), we estimate that the GDP blend value ranking, used in the current flawed formula, will be as

<sup>14</sup> If  $GDP_{mer}/GDP_{ppp}$  is correlated with cross border real wealth holding, this can justify its use in the blend.

<sup>15</sup> One must ensure against double counting of cross border holdings to get to the real capital held by foreigners.

follows in 2011: USA, China, Japan, Germany, *India*, France, UK, *Brazil*, *Italy* and Russia. Thus even in terms of the questionable GDP blend used in the current quota formula, India will be ranked number five above France and UK and Brazil will be ranked higher than Italy.<sup>16</sup>

The inclusion of financial variables representing the size of the domestic or the internationalized financial sector, are even more problematic. The development of the financial sector should be commensurate with the general economic development of the economy. If excessive restrictions lead to financial underdevelopment, the country's economic growth would suffer. If excessive incentives and loose regulations, lead to a bloated financial sector, too large in proportion to the real economy, it is not only a danger to the country's economy but can pose serious risks to the rest of the world. There is no reason to reward through the quota formula, countries whose behavior can have negative consequences for global financial stability (Incentive compatibility principle).

#### 4. Contribution to World Growth

Though the IMF quota formula does not contain the variable „economic growth,“ this variable has lurked behind the scene in the last two quota revisions. Unfortunately it had to be brought in very indirectly and non-transparently in a two level process, with the second stage falling back on the flawed formula. It is perhaps time to bring it more explicitly into consideration. What is important for the global economy is a country's contribution to world economic growth. Since 2008 and during the rest of the current decade (perhaps for several decades) the pace of global growth is going to be a key issue for global economic institutions like the IMF. In such an environment it is worth considering whether the contribution of an economy to global growth is a relevant indicator of a country's importance to the World economy? Should it not be reflected in the quota formula?

Traditionally the USA, Japan and European countries have been the major contributors to global growth. Few realize the dramatic transformation that has taken place since 2006. China and India have been the top two contributors to global growth since 2006 (tables 1 and 2)). Even if we treat the Euro as a single entity, India has been the second largest contributor to World growth since 2007 (table 2). In 2010 its contribution was more than a third of that of China. According to IMF projections, India drops to third place behind the US, in 2010 and 2012 to 2014. It will be back at second place from 2015. In our view these IMF projections are like to prove over (under) optimistic about the USA (India) and consequently India will remain the second largest contributor to global growth.

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<sup>16</sup> Our projections allow for real exchange rate changes in contrast to the IMFs. India will be ranked fourth, ahead of Germany if a 40-60 (MER-PPP) blend is used instead of the current 60-40 blend.

**Table 1: Contribution to World Growth – Absolute**

<b>Table: Structural Transformation of Global Economy</b>									
	Contributions to Global growth								
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
China	1.53	1.10	1.14	1.39	1.34	1.39	1.45	1.52	1.59
India	0.45	0.30	0.29	0.51	0.46	0.45	0.48	0.50	0.51
United States	0.41	0.00	-0.54	0.53	0.45	0.59	0.55	0.52	0.41
Euro area	0.43	0.06	-0.59	0.25	0.21	0.25	0.25	0.24	0.22
Russia	0.27	0.17	-0.24	0.12	0.13	0.13	0.13	0.12	0.12
Brazil	0.17	0.15	-0.01	0.22	0.12	0.12	0.12	0.12	0.12
Japan	0.15	-0.07	-0.31	0.17	0.09	0.11	0.10	0.09	0.09
United Kingdom	0.09	0.00	-0.15	0.05	0.06	0.07	0.07	0.07	0.07

Note: These are based on IMF WEO growth projections

**Table 2: Contribution to World Growth – Rank**

	<b>Rank: Contributions to Global growth</b>								
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
China	1	1	1	1	1	1	1	1	1
India	2	2	2	3	2	3	3	3	2
United States	4			2	3	2	2	2	3
Euro area	3	5		4	4	4	4	4	4
Russia	5	3		7	5	5	5	5	5
Brazil	6	4		5	6	6	6	6	6
Japan	7			6	7	7	7	7	7
United Kingdom	8			8	8	8	8	8	8

Note: These are based on IMF WEO growth projections

## 5. Openness in a Globalised World

The openness variable, which plays an important role in the quota formula, may have been relevant in the post-war world of trade barriers and trade disruptions, but has little or no traction in a globalised World economy in which 80% of countries are members of WTO and most of the important remaining countries are interested in or trying to join. Such a

globalised world, assuming a neutral tax-subsidy policy regime with respect to trade, would be characterized by varying ratios of trade to GDP, depending on resource endowment, geographical location and natural comparative advantage. For instance, large economies would have smaller ratio of trade to GDP than smaller ones. There is no logical reason to give a higher quota to countries with higher trade ratios and vice versa. Doing so would provide an incentive for countries to distort trade by giving export subsidies and/or taxing imports or keeping their currency undervalued.

It also produces anomalies like the following: If a country (e.g. Yugoslavia) breaks up into two or more independent countries, part of what was earlier internal trade would now be classified as external trade, resulting in an increase in the total external trade of the countries and so would the quota share. If the opposite happens and two or more independent countries combined to form a single country their aggregate quota share would decline. Is this either rational or fair?<sup>17</sup>

One logical way to consider inclusion of a trade variable in the quota formula would be in terms of deviations from normal comparative advantage, brought about through policy intervention. If higher trade is due to policy intervention (tax-subsidy or exchange rate distortion) it can be penalized but should definitely not be rewarded. Thus in this case deviations from „optimal“ or non-intervention“ ratios, in either direction, should be penalized. However, it is much too complicated and difficult to do so in practice, and therefore the best policy would be to drop the variable entirely from the formula.

#### *Financial Openness: Post- crisis*

The latest version of the Quota formula includes factor payments along with trade in the definition of openness. Some analysts have recommended giving greater weight to financial variables (flow or stock) in the quota formula. However, the arguments we have made with regard to openness in trade in Goods and Services (current account of BOP) also apply to openness with respect to capital flows (capital account of BOP). Deviations from a neutral benchmark can be a positive or negative factor for stability depending on source and host country conditions (Global monetary conditions, Regulations, Fiscal situation, external and domestic shocks). As the recent global crisis has clearly demonstrated, unregulated or laxly regulated financial flows can result in financial bubbles and busts, cross-border surges and sudden stops and can have devastating consequences on financial stability and the real economy. The externalities that they produce must be addressed through (Piguvian) taxes and related counter-measures so as to internalize these externalities. It would be a complete contradiction of these lessons to reward countries for these negative spill-over effects through a quota formula that entitles them to a higher quota. Thus, the argument for the „openness“ variable in the quota formula appears quaint in the 21<sup>st</sup> century globalized economy.

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<sup>17</sup> A similar anomaly arises if we want to treat the Euro Area as a single economy: Logical consistency requires that we exclude intra-EU trade from the calculation of external trade ratios for EU member countries.



*Net Contribution to World Demand*

In this period of low global aggregate demand, a variable which is much more relevant than openness is a country's contribution to global net demand. This can be measured by the ratio of countries' current account deficit to the aggregate of all current account deficits (which for the World as a whole should equal the total of all current account surpluses). Thus countries with current account surpluses would be subtracting from global net demand and therefore making a negative contribution. Table 3 shows the top contributors to and top depressors of, net demand. The United States has been the largest contributor to global net demand throughout the crisis. Surprisingly, India had become the second highest contributor by 2009, pushing UK to third position.

**Table 3: Net Contribution to Global Demand**

<b><u>Contribution to Global Demand (net)</u></b>					
Balance on goods and services (\$bi)					
					<b><u>Contribution</u></b>
<u>Country / Year=&gt;</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2009</u>
	<b>Deficit on Current Account</b>				<b>Positive</b>
<b><u>Deficit countries</u></b>	-1263.9	-1352.7	-1508.9	-908.0	100.0%
United States	-760.4	-701.4	-695.9	-373.9	41.2%
India	-33.3	-45.2	-65.7	-58.9	6.5%
United Kingdom	-76.5	-90.0	-70.9	-50.8	5.6%
	<b>Surplus on Current Account</b>				<b>Negative</b>
<b><u>Surplus Countries</u></b>	1534.2	1759.1	1911.0	1280.9	100.0%
China,P.R.: Mainland	208.91	307.48	348.87	220.60	-17.2%
Germany	166.48	238.92	252.06	176.17	-13.8%
Russian Federation	125.53	111.27	154.69	90.80	-7.1%
Netherlands	56.95	69.26	70.13	66.46	-5.2%

Source: Authors calculations using WEO database.

Note: Total deficits do not equal total surpluses because of errors & omissions.

When rebalancing is such a vital issue for reviving economic growth in the advanced economies and sustaining overall World growth, this variable is certainly worth considering. However, it shares with the trade and current account variables (openness), the problem that too much of a "good thing" can be a bad as it potentially sets the stage for global instability. Further when a shortage of demand is no longer an issue and the world possibly enters a situation of global savings shortage because of aging of population in advanced countries and

China, the weights may have to be first reduced to zero and then inverted. Nevertheless, at the current juncture, it appears to be a more relevant variable for inclusion in the IMF quota formula than openness.<sup>18</sup>

## 6. Voice and Representation

Technical work done by the G24 secretariat (2008, 2010) has shown that the existing index of variability is a highly flawed measure of the demand or borrower side of the IMF membership, as it does not capture the potential demand for BOP financing by developing countries. We agree that the G24 secretariat's formulation of scaling by mean of the series is an improvement on the existing index, because it makes it more amenable for cross-country comparison. It can be the basis for revision of „variability“ index. However, the proposed index does not seem to be amenable to aggregation to obtain a measure of total global variability, and therefore it is unclear what meaning is conveyed by country shares in this global total (given that the quota formula and its components are expressed as shares in global totals)?

However, there is a more basic level at which we can discuss the issue of Voice and Representation, including the issue of „Diversity“ of staff and management. Both these are fundamentally about people not economic size. Sub-Saharan Africa had in 2010, 11.7% of World population but only 2.4% of aggregate world GDP.<sup>19</sup> Similarly, Bangladesh has only 0.3% of the World's GDP but 2.4% of the World's population. They therefore also had approximately 11.7% and 2.4% of the World's female population. Thus both voice and diversity should be benchmarked against shares in World population.<sup>20</sup> As GDP PPP is much more closely correlated to population than GDP MER (correlation coefficient of 0.66 vs. 0.46) replacement of the GDP MER share variable with GDP PPP shares will also raise the quota share of these countries/regions.<sup>21</sup> However, if the current GDP blend is not changed significantly, the need for population weight will be even more important and urgent.

The share of Sub-Saharan Africa in the World's poor (as defined by the World Bank) is even higher than in population.<sup>22</sup> Thus giving a voice to the world's poor would argue for using the country share of the World's poor. It seems to us that to fully give voice to the poorer developing countries a measure of volatility should be weighted by either (a) the share of the World's poor or (b) population shares or (c) a blend of the two, so that the World's poor have an adequate voice in the IMF. Alternatively, in the interest of simplicity we

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<sup>18</sup> If the WTO was a quota based institution, the openness variable could be justified in the WTO quota formula.

<sup>19</sup> The IMF WEO, correctly, gives aggregate World GDP only in terms of GDP PPP, It does not show any measure for aggregate world or regional GDP at MER. If we add up all countries' GDP MER to get a total and derive a share, this share will be even lower for these and other poor regions/countries.

<sup>20</sup> Gender diversity should be benchmarked against the share and distribution of females across the World.

<sup>21</sup> As would a rise in the Gdp Ppp share in the blend. Further, as these countries are expected to grow faster than the Advanced economies, their share in World GDP will grow over time raising their quota. For the same reason this proposal will be resisted by the rich countries, including those known/acclaimed for their contribution to development aid to Africa and other poor regions/countries.

<sup>22</sup> About 27% at the \$1.25 a day (per person) poverty line.

could, dispense with the „volatility“ variable and just use one of these three as the voice variable.

### *Board Representation*

Another issue of representation is with respect to the Board of Governors and the executive board. The European Union (EU) with about 7.3% of the World population and about 20.4% of aggregate World GDP has about 1/3<sup>rd</sup> of the IMF quota and 40% of the 20 permanent seats (only 1/3<sup>rd</sup> of the current 24 seats). It has also had a monopoly on the position of Managing Director for the last half century, with the USA correspondingly holding the position of first deputy managing director (FDMD).<sup>23</sup> Such an overwhelming position of one highly integrated region in an international organization can give rise to questions about whether it is truly an *International Monetary Fund*.<sup>24</sup> Media buzz about the BRICs as a counter to the G7 merely serves to camouflage this underlying reality and detracts from a search for real solutions!

The creation of a fourth DMD position for China, resurfaces questions about the role, number and selection of DMDs: Shouldn't there be objective criteria for determining the number of DMDs, such as the size of the World economy? Should selection be on the basis of country size,<sup>25</sup> or by defining and matching requirements with qualifications? A better process for selection of the MD and DMDs is to remove nationality from the equation to the maximum extent possible. One way to convert the mantra of “merit based selection without regard to nationality” into reality, would be to create a procedure for judging “international orientation” or the “internationalism” of potential candidates for the MD and DMD. For instance an independent international panel of non-government professionals could be set up by the IMF to rank potential candidates by their degree of „internationalism“ (converse of Nationalism/ Parochialism) and apply a cut-off above which they would be suitable to head an “international” organization such as the IMF. A merit based selection can then be applied to candidates above this threshold with their internationalism ranking as one of the merit criteria.

## **7. Summary and Conclusions**

### *Summary*

Table 4 summarizes our discussion on variables that reflect economic reality and contrasts it with the Quota proposals that have been approved by the executive directors and the Board of Governors, but are still in the process of formal approval (and/or financial contribution) by the member governments of the IMF. These are shown in the 4<sup>th</sup> and 5<sup>th</sup>

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<sup>23</sup> The USA with 4.5% of the World population and 19.4% of World GDP has 17.5% of the quota and 5% of the permanent seats. However its shareholding gives it a veto over major changes (which require 85% majority).

<sup>24</sup> Martin Wolf in an „Op Ed“ article (Financial Times, London, June 2011) called it the “*European Monetary Fund*.”

<sup>25</sup> With the MD position held by an EU national, four DMD positions would in order of country size be for USA, China, Japan and India-- however the 4<sup>th</sup> DMD position is currently held by an Egyptian.

columns. The 2<sup>nd</sup> and 3<sup>rd</sup> columns show the ten largest countries ranked by size. The 6<sup>th</sup> column shows the contribution of these ten countries to global growth and the next three columns the ranking of net contribution in 2007, 2008 and 2009. The last two columns show the contribution of these countries to net global demand and their corresponding ranking.

The gap between economic and quota rank is the widest for India. India's Quota share after the latest proposals are implemented will be the eighth highest (columns 4, 5). India is in 2009, the fourth largest economy in the world (columns 2, 3) and is now projected to be the third largest in 2011. It was in 2009 and three previous years the second highest contributor to global growth (columns 6 to 9) and was the second highest contributor to global net demand in 2009. By many different measures, India will be, by the end of 2011, among the top five economies in the World. It is questionable whether a Global economic governance system that doesn't acknowledge this reality can claim to be legitimate or credible.

**Table 4: Gap between Quotas and Economic Reality**

Country	Aggregate GDP share /1		Proposed quota share		Contribution to Global Growth /2				Net Contribution to Global demand	
	Share	Rank in	PTR (%)	Rank	Share	Rank in			2009 /3	Rank in 2009
	2009	2009			2009	2007	2008	2009		
United States	20.4	1	17.4	1	-0.54	3	162	-ve	41.2	1
China	12.6	2	6.4	3	1.14	1	1	1	-17.2	-1
Japan	6.0	3	6.5	2	-0.31	6	-ve	-ve	2.5	less than -15
India	5.1	4	2.8	8	0.29	2	2	2	6.5	2
Germany	4.0	5	5.6	4	-0.19	7	10	-ve	-13.8	-2
United Kingdom	3.1	6	4.2	5	-0.15	10	-ve	-ve	5.6	3
France	3.0	7	4.2	6	-0.08	14	80	-ve	4.7	4
Russia	3.0	8	2.7	9	-0.24	4	3	-ve	-7.1	-3
Brazil	2.9	9	2.3	10	-0.01	5	4	-ve	6.1	less than -15
Italy	2.5	10	3.2	7	-0.13	23	-ve	-ve	0.9	below 15

**Notes:**

1/ Data are from Table A of the Statistical Appendix of the World Economic Outlook, October 2010.

2/ Based on data underlying the charts Figure 1.2 (global indicators), World Economic Outlook, 2009 and earlier issues  
China & India's rank remain unchanged at 1 & 2 respectively (2008 & 2009) even if EMU (Euro area) is treated as a single economy.

3/ Based on data for Goods and Services Export and Import, given in data base of the World Economic Outlook

Net Contribution to Global Demand is based on the balance of trade(G&S). A deficit(surplus) represents positive(negative) contribution  
i.e. -1 means the largest negative contributor or country with the largest absolute surplus on goods and service (G&S)account.

The structure and sector development of a country depends on its comparative advantage, stage of development (real per capita GDP) and history (including policy choices made earlier). This is equally applicable to trade, non-trade current account, capital flows and financial sector development. There is no reason for rewarding a country (through the quota formula) for having a higher than normal/natural value or ratio of these indicators. On the contrary policy intervention to raise any of these ratios should actually be penalized so as to align IMF policy advice to quota incentives. Further excessively large capital flows or a larger than normal financial sector can pose a risk to the country and/or the rest of the world, by creating bubbles and busts, surges and sudden stops. Thus it can contribute to heightened

risk and global instability. The complexity/difficulty of devising a non-linear formula for such variables and the unlikely hood of anyone accepting a variable that has a negative effect on (i.e. reduces) the calculated quota, argues for leaving them out of the formula altogether.

### *Conclusion*

The Implications for IMF Quota Reform are clear. There is a large gap between economic reality and IMF quotas. Dissatisfaction among global public opinion can only be reduced or eliminated if Quota shares are changed to reflect the current and fast changing economic reality. This requires a much greater role for the relative size/power of economies, an element that is not adequately captured by the existing formula. Unless fully taken into account, dissatisfaction will persist after 2013, the year in which the next quota reform is to be completed. The gap is likely to widen every year unless the formula is modified appropriately. If we want a simple and transparent formula, then it needs to have only two variables: The relative size of economies as measured by GDP PPP shares in world aggregate GDP to reflect economic weight and surrendered autonomy and the proportion of the World's poor living in the country to reflect „voice“. If some degree of complication is found acceptable in the quota formula, these could be modified by blending with GDP MER and country population share respectively. The GDP blend could then include GDP MER up to a proportion equal to the ratio of cross-border holdings of (real) capital stock to total World capital stock. Similarly the voice variable could be a blend of share of World poor and share of World population with or without an improved variability index.

The decision on whether or not to include variables such as contribution to global growth and net demand depends on how simple and transparent we want the Quota formula to be? If we are willing to put up with complexity, then it makes sense (incentive compatible) to replace the openness and reserves variable by the contribution to global growth and contribution to net demand variables. The latter two variables are much more relevant to the IMF's objective of preserving Global economic growth and rebalancing the global economy to produce sustained economic growth (at least over the next decade). However, if we are keen on simplicity and transparency as additional attributes of a new quota formula, it would make sense to replace the three variables, „GDP hybrid“, „Openness“ and „Reserves“ by a single variable, „country GDP PPP share in world aggregate GDP“ (which reflects purchasing power of the GDP in terms of real goods and services that can be bought). Once the principles underlying this proposal are accepted, it should not be difficult to work out a phased transition from the current to a new formula by progressively reducing the share of the “Openness” variable to zero over five years (say).

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