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Shareholding Formulas in International Financial Institutions: Learning From the Asian Infrastructure Investment Bank

Bin Gu[*] and Tong Liu[**]

ABSTRACT

Shareholding formulas determine member countries' voice in capital-based international organizations. They are crucial for international finance and draw much attention in negotiations. In principle, these formulas reflect member countries' relative economic positions, but in practice, they serve as a starting point in negotiations, alongside other economic and political factors. This article investigates the unique shareholding formula of the Asian Infrastructure Investment Bank (AIIB), and compares it with those of the Bretton Woods institutions, that is, the International Monetary Fund (IMF), the International Bank for Reconstruction and Development (IBRD), and the International Finance Corporation (IFC). It shows that both the AIIB and the Bretton Woods institutions have learnt from each other's shareholding formulas. Built upon the Bretton Woods practice, the AIIB's gross domestic product-based shareholding formula could stimulate the IMF to establish a new quota formula under the 16th general review of quotas, the IBRD to implement the results calculated from its 2016 Dynamic Formula, and the IFC to develop its own formula by the date of the next shareholding review in 2025.

I. INTRODUCTION

A country is related to an international financial institution (IFI) through its membership. The membership, in turn, results from the country's financial contribution to the institution. The size of the country's financial contribution, called capital shares,[1] largely decides its voice in the IFI. In turn, the IFI's total capital stock, which sums up all members' financial contributions, determines the institution's power and influence in global governance.

* Bin Gu is an associate professor at Beijing Foreign Studies University Law School and China Forum expert. Email: gubin@bfsu.edu.cn.
** Tong Lius is an associate professor at University of International Business and Economics Law School, and corresponding author. Email: 01576@uibe.edu.cn.
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1 Member countries' financial contributions to IFIs include monetary forms other than capital shares. For example, while IMF quotas (i.e. capital shares, special drawing right (SDR) 477 billion in total) are the main source of IMF financing, its borrowing arrangements (i.e. SDR 361 billion for multilateral borrowing and SDR 135 billion for bilateral borrowing) temporarily supplement quota resources. AIIB members may similarly contribute to a special or trust fund of the institution, besides their capital–share contribution.

Thus, the mechanism affecting capital distribution among IFI members—the shareholding formula—has long been a critical subject in international finance. Such a mechanism determines the amount of capital that a member country must subscribe to or has the right to subscribe.[2] The guiding principle for capital distribution in each IFI is that it should be proportionate to a member's relative position in terms of economic weight, because IFIs depend on the (continuous) financial contribution and support of members. A widely accepted parameter in measuring a country's weight in a modern economy is gross domestic product (GDP), which plays a dominant role in the mechanism of capital distribution in IFIs.

However, variables other than GDP may be considered in a shareholding formula. The choice of the other variables depends on the IFI's mission. For example, given the World Bank's mission of poverty reduction, its shareholding formula assigns weight to member countries' contributions to its soft-loan window, that is, the International Development Association (IDA).[3] A second example is the distribution of the International Monetary Fund's (IMF) capital shares (quotas), where variables such as economic openness, susceptibility to exogenous shock, and international reserves are considered, given the IMF's role in maintaining member states' equilibrium of the balance of payments (see Figure 1).

Meanwhile, IFIs are not merely economic but also political institutions, typically being a cooperative among sovereign states.[4] First, the IFI upholds democratic representation in its governance and operations, where every member's voice and participation should be guaranteed, which implies that the capital contribution is a major but not the only factor in deciding a member's voting power in an institution. In addition to capital shares derived from the shareholding formula, a minimum voting power for each member (known as basic votes), however small a member's capital contribution, is required in most IFIs.[5] Besides, other political factors are frequently considered when allocating capital shares, largely at the discretion of the initiating powers of the institution.[6] However, such considerations and relevant weights conferred can be opaque. After all, those factors are not reflected in any formula or mechanism.

This study selectively reviews the mechanisms of capital allocation in four IFIs, namely, Asian Infrastructure Investment Bank (AIIB), IMF, International Bank for Reconstruction and Development (IBRD), and International Finance Corporation (IFC). Their selection is based

[2] There are at least three versions in the Articles of Agreement (AOA, or the Charter) of the IFIs regarding a member's right (or obligation) to subscribe to a particular number of shares. Version 1: In some IFIs, capital shares are designated to a particular member as a ceiling, of which the member may subscribe at the maximum, but with no floor requirement. The arrangement is exemplified in the AIIB AOA Article 5.1: 'Each member shall subscribe to shares of the capital stock of the Bank … **The initial number of shares available to be subscribed** by countries which become members in accordance with Article 58 shall be that set forth in Schedule A' (emphasis added). Echoed in practice, for example, Brazil, as an AIIB founding member, has subscribed 50 shares only out of the 31,810 capital shares designated to it in Schedule A. See further below in Section II. Version 2: Some institutions indeed have a floor or minimum requirement of capital subscription for each member. For example, IBRD AOA Article 2.3(a) stipulates that '**The minimum number of shares to be subscribed** by the original members shall be those set forth in Schedule A' (emphasis added). In Article 5.1 of AOA of the European Bank for Reconstruction and Development (EBRD), in addition to the provisions of the same effect as in the AIIB, it stipulates that 'No member shall have an initial subscription of less than one hundred (100) shares'. Version 3: In other institutions, the number of shares to be subscribed by a member, as specified in a schedule, is an exact requirement. For example, African Development Bank AOA Article 6.1 stipulates: '**The initial number of shares to be subscribed** by a State which acquires membership in accordance with paragraph 1 of article 64 of this Agreement shall be that set forth in this respect in annex A to this Agreement, which shall form an integral part thereof' (emphasis added). Asian Development Bank (ADB) follows suit.

[3] In this article, the World Bank refers to both the IBRD and the IDA. This article does not discuss the IDA's voting rights framework, where each member receives the votes to be allocated under IDA replenishments, which consist of subscription votes and membership votes. For example, IDA20, the latest replenishment, agrees upon 'A flat uniform vote price of $17,670 for all Non-Recipients, where Non-Recipients will receive additional subscription votes based on their replenishment contributions', while the combined voting power of Recipients will be boosted to 20.50% in recognition of the importance of poor countries' voice. IDA, 'IDA20 Final Replenishment Report: Building Back Better from the Crisis: Toward a Green, Resilient and Inclusive Future' (17 February 2022) at 199 (Annex 17 'IDA Voting Rights Framework', paras 26–28).

[4] The membership of some IFIs (such as the AIIB, the ADB, etc.) is also open to non-sovereign entities.

[5] Basic votes in the IBRD (plus IFC), IMF, AIIB, and ADB are currently set at 5.55%, 5.502%, 12%, and 20% of total votes respectively. It should be noted that the EBRD is a major exception with no basic votes. EBRD AOA, Article 29.1.

[6] For an account of the political nature dominated by the USA in the IMF's quota distribution in 1944 and subsequent quota shifts, see Ayse Kaya, *Power and Global Economic Institutions* (Cambridge: Cambridge University Press, 2015), at 51–80.

IFIs	Current shareholding formulas	Key features of current formulas	This article's proposals for reform
AIIB	The GDP-based formula	GDP measured with 60% at market rates and 40% at PPP rates, consistent with the formulas of IMF and IBRD. 75% of total capital stock reserved for regional members, and 25% for nonregional members.	Measure GDP with a weight of 40% at market rates and 60% at PPP rates.
IMF	The 2008 quota formula	$(0.5 * \text{GDP} + 0.3 * \text{Openness} + 0.15 * \text{Variability} + 0.05 * \text{Reserves})^{0.95}$ 0.95 is the compression factor	Measure GDP with a weight of 40% at market rates and 60% at PPP rates. Increase the weight of GDP to 80%, the remaining 20% to indicate other IMF-specific mandates. Replace the compression factor with a higher percentage of basic votes (12%).
IBRD	The 2016 Dynamic Formula	$(0.8 * \text{GDP} + 0.2 * \text{IDA})^{0.95}$ Where IDA = share of IDA replenishments, 80% last 3 replenishments, 20% historical.	Measure GDP with a weight of 40% at market rates and 60% at PPP rates. Replace the compression factor with a higher percentage of basic votes (12%). Implement calculated shareholdings from the Dynamic Formula as soon as possible.
IFC	N/A	Use IBRD shareholding as a baseline	A separate GDP-based formula should be developed.

Figure 1. Shareholding formulas across the four IFIs.

on the following factors: IBRD, IMF, and IFC are Bretton Woods institutions, and they have long driven the global financial architecture. Under the World Bank Group (WBG), the World Bank, consisting of IBRD and IDA, is responsible for public (or sovereign-backed) financing through both hard-loan (for IBRD) and soft-loan (for IDA) windows, while the IFC is responsible for private-sector financing. The three financial institutions work together in the cause of development.

The AIIB is derived from the Bretton Woods system in terms of both corporate governance and modus operandi,[7] and it is now the second largest multilateral development bank (MDB) after the World Bank by membership.[8] With the DNA of Asian founders,[9] the AIIB increasingly presents itself as a global institution, featuring the so-called four globals: global membership, global investment, global procurement, and global recruitment.[10] In terms of functionality, the AIIB combines the roles of the IBRD and IFC. It provides both public- and private-sector financing, but lacks a soft-loan window similar to the IDA. In this regard, the AIIB has not only built itself based on Bretton Woods, given its commitment to embracing the new century as a new MDB,[11] but as this article shows, its innovative elements with respect to the shareholding formula also explain the continuous reform and improvement of the Bretton Woods institutions.

This article does not consider the shareholding benchmarks of other peer regional MDBs, but presents a brief description of their initial capital allocation criteria.[12] For the Inter-American Development Bank, the US capital contribution served as the starting point, with the USA as the majority shareholder; shareholdings of the other members closely followed their quotas in the IMF. For the African Development Bank, which consisted only of African members at the time of establishment, shareholding was based on the economic capacity of each member, with a formula consisting of three elements with different weighting: national gross product (65%), the amount of taxes collected (15%), and amount of exports (20%). For the Asian Development Bank, several formulas featuring economic capacity were used for regional members, and a minimum of US$5 million capital amount was contributed by nonregional members.[13]

II. THE GDP-BASED FORMULA IN THE AIIB

The AIIB adopts a GDP-based shareholding formula: GDP is the only parameter used to determine capital distribution among its members. The formula is stipulated in the Chief Negotiators' Report (the 'Report') on the AIIB Articles of Agreement (AOA). It is not an integral part of the AOA, a treaty, and may therefore be updated or revised much more easily than by amending the AOA itself. Notwithstanding, the Report functions as an authoritative explanatory instrument for the relevant parts of the AOA.[14] Thus, the positioning of the shareholding formula in the AIIB, as attached to the AOA, offers it a higher legal status than those of the Bretton Woods institutions, which are resolutions of the Board of Governors.

However, the Report does not mention how to measure the GDP. According to a press release by the Chinese Ministry of Finance in 2015, GDP was measured both at market exchange rates

7 In terms of corporate governance, the AIIB resembles the World Bank and the IMF in establishing a three-layered governance structure, i.e. the Board of Governors, the Board of Directors, and management led by the President. The AIIB also sets up high environment, social and procurement requirements, comparable to those of the Bretton Woods institutions.

8 European Parliamentary Research Service, 'Asian Infrastructure Investment Bank: How Lean, Clean and Green is the AIIB?' February 2021, at 3.

9 A discussion of Asian values as embedded in the AIIB is available at David M. Ong, 'The Asian Infrastructure Investment Bank: Bringing "Asian Values" to Global Economic Governance?', 20 (3) Journal of International Economic Law (2017), 535–60.

10 In terms of global membership, the AIIB has 105 members across six continents except Antarctica. In terms of global investment, the AIIB has invested across Asia, Oceania, Europe, Africa, and Latin America. In terms of global procurement, the AIIB AOA explicitly authorizes the institution to do so. And in terms of global recruitment, AIIB staffs are from both members and non-member countries, including the USA and Japan.

11 See a succinct description of the AIIB's general feature—'heritage and innovation', Natalie Lichtenstein, *A Comparative Guide to the Asian Infrastructure Investment Bank* (Oxford: Oxford University Press, 2018), at 36–38.

12 Andrés Rigo Sureda, 'The Law Applicable to the Activities of International Development Banks', in *Collected Courses of The Hague Academy of International Law* (Volume 308) (Brill Nijhoff, 2004), at 43.

13 The split between regional and nonregional shares in the ADB is 60:40, as opposed to 75:25 in the AIIB, which is elaborated in Section II. Kai Yin Allison Haga, 'The Asian Infrastructure Investment Bank: A Qualified Success for Beijing's Economic Statecraft', 50 (3) Journal of Current Chinese Affairs (2021), at 399.

14 The Chief Negotiators' Report identifies itself as 'part of the AIIB's basic documents, for future reference in interpreting the AIIB Articles'.

with a 60% weight and at purchasing power parity (PPP) rates with a 40% weight.[15] Such measurement is consistent with the shareholding formulas of both the IBRD and IMF. That the method of measuring the GDP failed to appear in the Report (thus leaving the impression of being informal) probably reflects the awareness of those who drafted the AIIB Charter that the discussion of increasing the weight of PPP GDP had long existed in other IFIs, as discussed in Section III, and the AIIB's tendency to modify its measuring method readily in future reviews.

The GDP-based formula does not apply equally across all AIIB members, in contrast to the practice of the IBRD and IMF as global institutions. Rather, with the AIIB membership divided into both regional and nonregional groups, 75% of the authorized capital stock (i.e. US$100 billion) should be retained within the regional group, as indicated in the Chief Negotiators' Report.[16] Thus, regional members (i.e. the Asian and Oceania members, alongside Russia[17]) share the lion's share of US$75 billion, while nonregional members (such as G-7 countries other than the USA and Japan (non-members of the AIIB), alongside African and Latin American members) share the remaining, smaller pie of US$25 billion. By the way, although the GDP-based formula is 'indicative only for nonregional members' (quoting the Chief Negotiators' Report), it was applied in capital allocation for these members.

If the USA and Japan decide to participate in the AIIB someday, they would be treated as admitted members rather than founding members and receive treatment different from the founding members in capital distribution. Rather than reflecting their relative share of the global economy with the aid of the GDP-based formula, and thereby, overhauling each existing member's shareholding, the USA and Japan would be entitled only to the unallocated authorized capital stock, which is small.[18] Another source of capital subscription for new members would be the shares previously allocated to the prospective founding members (PFMs), which failed to subscribe fully or in time.[19]

Brazil is one such founding member that subscribed to its capital shares neither fully nor in time. A PFM at the time of formation of the AIIB in 2015, Brazil was allocated 31,810 shares.[20] The country, however, only became a full member on 24 November 2020, almost four years later than anticipated,[21] and with just 50 shares subscribed (i.e. US$5 million), in part due to national fiscal difficulties.[22] The freed-up portion of 31,760 shares were added back to the unallocated capital stock of the AIIB, which are available for new members to subscribe.

Canada joined the AIIB after its establishment. It is allocated 9954 shares, much more than the total unallocated 2336 shares available for new nonregional members, as stipulated in Schedule A of AIIB AOA. As there has been no increase in the authorized capital stock of the AIIB, the

15 Chinese Ministry of Finance, 'Press Release about the AIIB AOA' (史耀斌副部长就《亚投行协定》相关问题答记者问), 29 June 2015, http://www.mof.gov.cn/zhengwuxinxi/caizhengxinwen/201506/t20150629_1262934.htm (visited 12 September 2021).

16 Chief Negotiators' Report on the AIIB AOA, Article 5.3.

17 Russia is not a country of Asia and Oceania based on the United Nations (UN) classification, which the AIIB officially adheres to in defining its regional membership. But the country is somehow classified as regional in Article 3.1 (a) of AIIB AOA and Schedule A thereof, thus being able to rank the third largest shareholder, and winning a vice presidency of Russian nationality in the AIIB.

18 A small number of shares are left unallocated in both regional and nonregional groups after the initial capital allocation, as indicated in Schedule A of AIIB AOA. Those unallocated shares (16,150 shares for regional and 2336 shares for nonregional) are prepared for new members to join the Bank after its establishment, pursuant to the Chief Negotiators' Report.

19 The membership of Kuwait and South Africa, two prospective founding members, has been delayed for years since 31 December 2016—the original deadline of deposit of ratification instruments. The shares originally allocated to the two countries in AIIB AOA Schedule A could be subscribed by new members.

20 See AIIB AOA, Schedule A.

21 Ibid, Articles 58.1 stipulates: 'Instruments of ratification, acceptance or approval shall be deposited with the Depository not later than 31 December 2016, or if necessary, until such later date as may be decided by the Board of Governors by a Special Majority vote as provided in Article 28'.

22 It is interesting to note that Korea is another founding member that did not subscribe fully; it subscribed 37,387 shares out of 37,388 allocated shares, i.e. only one share less than originally allocated in AIIB Schedule A. However, most AIIB founding members subscribed fully to the capital stock as allocated to them. AIIB, 'Members and Prospective Members of the Bank', 24 August 2021, https://www.aiib.org/en/about-aiib/governance/members-of-bank/index.html (visited 13 September 2021).

gap must have been filled by the availability of such freed-up capital shares that were originally allocated to PFMs but eventually unsubscribed by them, as in the case of Brazil.

Shareholding determines a member's voting power in the AIIB. Specifically, capital subscription of each US$100 thousand equals one share, and each share equals one vote ('share votes'). A second important source of a member's voice is basic votes, which are automatic and equally distributed among the membership. The third component that counts for a member's voting power is PFM votes, which are exclusive to the 57 PFMs, amounting to 600 votes for each on fulfilling membership.[23] All votes across these three groups are equal in weight. Of the total votes in the AIIB, basic votes are designated at 12% under the AOA explicitly,[24] to ensure representation of smaller and poorer member countries; PFM votes are about 3%,[25] and share votes about 85%.

The AIIB Charter requires capital reviews at least every five years.[26] The purpose of capital review is two-fold: to determine whether the authorized capital stock is sufficient, or should be increased, and whether the distribution of shareholding should be adjusted to reflect the evolution of members' relative economic positions. Under the AIIB Charter, as in the Charters of other IFIs, any increase in the authorized capital should be distributed in proportion to the existing shareholdings of members ('preemptive right').[27] Such an arrangement known as General Capital Increase, however, would fail to change members' relative shareholding positions, defeating the purpose of an equitable balance of voting power in capital review. The AIIB Charter, accordingly, accords members the right to relinquish their preemptive rights,[28] with the shares so relinquished to be subscribed by those underrepresented, aided by the GDP-based formula. This is known as Selective Capital Increase (SCI) in other IFIs,[29] which has the benefit of facilitating the result of shareholding (and voting power) adjustments across members.

Indeed, a successful shareholding realignment is premised on the overrepresented members' willingness to relinquish their preemptive rights.[30] In the Bretton Woods institutions, however, overrepresented member countries either expressly refuse to relinquish their preemptive rights or veto any increase in the authorized capital stock, despite its criticality amid global crises when the institutions' balance sheets are strained,[31] making the implementation of shareholding realignments a Herculean task, as revealed in the IBRD's 2020 shareholding review in Section IV.

A subject of much debate is China's veto power in the AIIB. Aided by the GDP-based formula applied within both regional and regional groups, respectively, China as a regional member is allocated about 31% of the total capital stock, making it the largest shareholder. China's shareholding is larger than those of the next five biggest shareholders combined (i.e. India, Russia, Germany, Republic of Korea, and France in order of largest shareholder after China to smallest shareholder).[32] With its shareholding translated into over 26% of total votes, China has veto power in decision-making that requires a super majority vote of 75% in favor.[33]

23 A PFM becomes a member of the Bank only after 'its instrument of ratification, acceptance or approval is deposited'. AIIB AOA Article 58.1.

24 The percentage of basic votes (12%) is stipulated in ibid, Article 28.1.

25 The percentage of PFM votes (3%) is concluded upon the condition that all PFMs fully subscribed their shares as allocated in AIIB Schedule A, which turned out to be not so. Lichtenstein, above n 11, at 152.

26 AIIB AOA Article 5.4.

27 Ibid, Article 5.4.

28 Ibid stipulates 'No member shall be obligated to subscribe to any part of an increase of capital stock'.

29 The practice of SCI is not rare in the Bretton Woods institutions, such as the 2018 SCI in the World Bank.

30 As the Development Committee states, '… members' subscriptions should reflect their relative position in the world economy, subject to the right of each member to maintain its existing pro rata share in the capital on the occasion of any increase in the authorized capital (pre-emptive right)'. Development Committee (Joint Ministerial Committee of the Boards of Governors of the Bank and the Fund), 'Enhancing voice and participation of developing and transition countries in decision-making at the World Bank and IMF' (DC 2003-0002, 27 March 2003), at 11–12.

31 Jonathan Wheatley, 'Multilateral development banks' balance sheets strained by global crises', *Financial Times*, 2 May 2022.

32 See AIIB, above n 22.

33 A super majority vote in the AIIB Board of Governors is defined as 'an affirmative vote of two-thirds of the total number of Governors, representing not less than three-fourths of the total voting power of the members'. AIIB AOA Article 28. Super majority decisions include capital increases, modifying the regional shareholding percentage, assistance to non-members, increase

China claimed that it had no intention of seeking veto power during the establishment of AIIB.[34] It declared that it was ready to contribute 50% of the Bank's authorized capital only to make things happen.[35] Subsequently, as more countries applied to join the Bank, it became unnecessary for China to commit that amount of capital.[36] China stated that it was open to further diluting its share votes as more members expected to join the Bank in the future.[37]

However, China will remain the largest shareholder before the next capital stock increases. Even when there is a need for capital stock increase, the Board of Governors must decide through a super majority vote in favor, where China holds a veto power.[38] That super-majority-vote requirement ensures China's decisive role in such an event, in addition to its preemptive right.

As veto power exists in many IFIs, the potential control by veto leads to governance concerns: should any member ever have a veto over any IFI decision? Some misunderstandings deserve clarification to address this question. First, asymmetric capital contribution justifies asymmetric representation. Weighted voting, rather than equal voting for each member, has been widely accepted since the Bretton Woods Conference in 1944.[39] Veto power could be understood as a reward to the initiating powers who have exercised leadership while having to bear significant financial and diplomatic costs for the IFIs' establishment and maintenance. Second, veto power in the IFIs is derived from specific percentages of votes required for a few key decisions, as intened to draw majority support. By contrast, veto power in the UN Security Council is derived from specific references to the five permanent members, as explicitly named by law.[40] The IFI version of veto power seems 'the lesser of two evils'. Finally, holding veto power does not necessarily mean using it, as what China does in the AIIB,[41] although the veto does not need to be used to influence governance, given the effect of its shadow. It concludes that the design of veto power in the IFIs is a rational choice, despite seemingly at a cost of equality and good governance.

III. THE QUOTA FORMULA IN THE IMF

In the IMF, shareholding is referred to as a quota. A quota is denominated in special drawing right (SDR), while capital in the AIIB is denominated in the US dollar. Similar to capital shares in the AIIB, quotas in the IMF play multiple roles, namely, they determine a member's financial contribution to the organization, decide its voting power, and decide new shares to be distributed to it in the case of a quota increase ('preemptive right').[42] However, the quota additionally decides how much a member state is allowed to draw (i.e. borrow) from the IMF.

in the lending limit, allocation of net income to other purposes, changes in the Board of Directors or its nonresident basis, election of the President and amendment of the AIIB Charter. Lichtenstein, above n 11, at 30.

34 'Chinese Deputy Minister of Finance says China has no intention to seek or drop a veto in the AIIB' (中国财政部副部长:所谓中方寻求或放弃亚投行一票否决权为不成立的命题), 25 March 2015, http://www.xinhuanet.com/politics/2015-03/25/c_1114763452.htm (visited 27 June 2022).

35 'Chinese Financial Minister says China does not seek a 50% capital subscription in the AIIB' (楼继伟:设立亚投行是多赢之举，中方出资不一定非达50%), 3 July 2014, http://www.gov.cn/xinwen/2014-07/03/content_2711747.htm (visited 27 June 2022).

36 Ibid.

37 Ibid.

38 AIIB AOA Article 4.3.

39 Harry Dexter White, one of the main architects of the Bretton Woods institutions, referred to the linkage between voting and financial contributions explicitly, 'If each member of the board were to be given an equal vote, then a small country that invested one million dollars would have as much power in making decisions as a country that has subscribed a hundred or a thousand times that amount'. Both advanced and non-advanced economies concurred with White in the Bretton Woods Conference. See Kaya, above n 6, at 55.

40 UN Charter Article 23.1 lists China, France, Russia, the UK, and the USA as permanent members of the Security Council, and Article 27.3 stipulates their veto power on non-procedural issues.

41 Bin Gu, 'China, the US and what it means to be a hegemon', *The Straits Times*, 16 July 2022.

42 For greater certainty, quota increase and distribution is distinct from SDR allocation, which can be done simply with a stroke of the pen. The IMF finished its largest ever SDR allocation in 2021, equivalent to 650 billion US dollars, in a bid to boost global liquidity among member states, in particular to cope with the impact of the COVID-19 crisis for most vulnerable countries. IMF members' existing quotas play a decisive role in SDR allocation, as they do in quota distribution. IMF, '2021 General SDR Allocation', https://www.imf.org/en/Topics/special-drawing-right/2021-SDR-Allocation (visited 3 June 2022).

This unique function of the quota is due to the IMF's designated purpose of assisting members with maintaining equilibrium in their balance of payments, as opposed to the development purposes of an MDB.

A quota formula is traditionally designed to reflect IMF members' relative importance in the world economy, subject to negotiations of both economic and political considerations. The original formula used at the Bretton Woods Conference in 1944 contained four variables, namely, national income, gold and foreign exchange reserves, the five-year average of annual exports and imports, and a variability measure based on maximum fluctuations in exports over a five-year period.[43] This formula functioned as a point of departure in negotiations both at Bretton Woods and in ensuing IMF meetings.[44] Decades later, in the 1960s, the IMF introduced a set of five formulas, producing 'somewhat higher calculated quotas for members with relatively small and more open economies'.[45] In 1983, the five formulas were further revised, with effects that 'the influence of variability of current receipts was reduced, GDP replaced national income, and reserves, which had been dropped earlier, were reintroduced'.[46] The current formula, known as the 2008 quota formula, is the outcome of the long-term effort to simplify the formulas.[47]

The 2008 quota formula has four variables: GDP (50%), openness (30%), variability (15%), and reserves (5%), all expressed in shares of global totals. Among them, in general, GDP captures members' relative positions in the world economy, measured in a blend of market exchange rates and PPP rates, weighing 60% and 40%, respectively; openness reflects members' degree of integration (mainly through trade) in the world market; variability illustrates members' exposure to exogenous shocks, and accordingly their potential need to draw from the IMF; and reserves represent members' ability to contribute to the organization. This formula includes a compression factor that reduces the dispersion in calculated quota shares across members, with the intended effect of redistributing quotas to the small and poor countries, and serving the purpose of democratic representation in the Fund.

The 2008 quota formula represents a major improvement upon its predecessors, if measured against the four guiding principles during the negotiations leading up to it, which are specifically that the formula should (i) be simple and transparent, so that the basis for differences in relative quota shares is readily understandable; (ii) be consistent with the multiple roles of quotas, appropriately reflecting global economic and financial trends and capturing members' relative positions in the world economy; (iii) result in calculated quota shares that are broadly acceptable to the membership; and (iv) be feasible to implement based on timely, high quality, and widely available data.[48]

The 2008 quota formula has been guiding quota adjustments of the IMF ever since, which occurs every five years to reflect the changing world economic landscape.[49] Particularly, the 14th general review of quotas resulted in the historic IMF reform—the 2010 Quota and Governance Reform, which is known for 'a shift of more than 6% of quota shares to dynamic emerging market and developing countries and also from overrepresented to underrepresented countries, while protecting the quota shares and voting power of the poorest members'.[50] This historic IMF

43 IMF, 'Quota Formula Review—Initial Considerations', 10 February 2012, at 6.

44 Andreas F. Lowenfeld, *International Economic Law*, 2nd ed. (New York: Oxford University Press, 2008), at 610, quoting Horsefield.

45 See IMF, n 43, at 6.

46 Ibid, at 6.

47 A group of external experts—the Quota Formula Review Group, after reviewing the five quota formulas, submitted a report to the IMF Executive Board in 2000, recommending the adoption of a single formula with two variables—market GDP and variability. IMF, 'External Review of the Quota Formulas' (EBAP/00/52, 5/1/00), 1 May 2000, https://www.imf.org/external/np/tre/quota/2000/eng/qfrg/annex/dload/EBAP52_Sup1.pdf (visited 24 August 2021).

48 See IMF, above n 43, at 4.

49 'The Board of Governors shall at intervals of not more than five years conduct a general review, and if it deems it appropriate propose an adjustment, of the quotas of the members'. IMF AOA, Art. III Section 2(a).

50 IMF, 'Press Release: Historic Quota and Governance Reforms Became Effective', 27 January 2016, https://www.imf.org/en/News/Articles/2015/09/14/01/49/pr1625a (visited 25 August 2021).

reform entered into force only after four years of delay by the USA.[51] The fear of the USA about its ratification is that '2010 will be a mere "down payment" on much bigger quota increases and reallocations to come',[52] which the USA considers as the greatest threat to its veto power, its top priority.[53]

For all its historic improvement and positive results, the IMF's current quota formula remains problematic.[54] First, the weight assigned to GDP at 50%, combined with a blend of 60% at market exchange rates and 40% at PPP rates in measuring GDP, is inadequate and should be increased.[55] Second, regarding openness, indicators of members' integration in the global capital market lack adequate development, and thus do not feature prominently in the quota formula partially due to data limitations, as opposed to trade-based indicators used since the Bretton Woods Conference in 1944.[56] Third, some factors are highly correlated, such as the relationship between GDP and openness (e.g. consider a country with a high ratio of exports to GDP), which may result in double counting. Fourth, there is little empirical evidence of a relationship between variability, which seeks to capture members' potential need for IMF resources, and the actual demand for such resources.[57] Fifth, regarding reserves, the formula fails to distinguish members' ability to contribute to the IMF from their actual contributions, the latter of which should be assigned more weight. Six, the compression factor 'would reduce transparency and could dampen the formula's ability to capture dynamism over time'.[58]

Meanwhile, negotiations on a new quota formula to address the deficiencies of the current formula are ongoing. The negotiations initially set a deadline of January 2013.[59] It then became a crux in the subsequent 15th general quota review, which promised to conclude by January 2014. It was prolonged until an official declaration of failure in 2020.[60] The quota formula reforms remain top on the agenda of the ongoing 16th general quota review, scheduled to conclude by December 2023.[61] As committed, '[a]ny adjustment in quota shares would be expected to result in increases in the quota shares of dynamic economies (i.e. emerging market and developing countries) in line with their relative positions in the world economy'.[62] The demerits in the

[51] The reform, initially set to take effect by October 2012, took effect in 2016. 'Press Release: IMF Managing Director Christine Lagarde Welcomes U.S. Congressional Approval of the 2010 Quota and Governance Reforms', 18 December 2015, https://www.imf.org/en/News/Articles/2015/09/14/01/49/pr15573 (visited 30 March 2022).

[52] Robert H. Wade and Jakob Vestergaard, 'Why is the IMF at an Impasse, and What Can Be Done about it?', 6 (3) Global Policy (2015), at 294.

[53] Similarly, the USA opposed the European Commission's proposal in 2015 for a single representation of the euro area in the IMF, which could form a constituency with more than 20% of the total votes and threaten the US's veto. Emanuel Castellarin, '«La réforme institutionnelle du FMI: du 4ème au 7ème amendement. Conséquence du changement des rapports de forces dans le monde ou de l'enseignement des crises?»', in Michael Waibel (ed), *Les implications juridiques des crises financières mondiales* (Leyde: Brill/Nijhoff, 2020), at 153.

[54] Ernando S. De Leon, 'the IMF Quota Formula Review', Bangko Sentral Review (the Philippines) 2011, at 43–47, referring to the IMF staff paper 'Quota Formula Review—Initial Considerations' and other sources.

[55] IMF, 'Report of the Executive Board to the Board of Governors on the Outcome of the Quota Formula Review', 30 January 2013, at 2–3, http://www.imf.org/external/np/pp/eng/2013/013013.pdf (visited 15 August 2022). The G24 Secretariat, Ted Truman (arguing for the Cooper formula) and many other external reports argue for the substitution of PPP GDP for market-based GDP. The rationale is that PPP GDP more correctly measures the level of economic activity in emerging markets and developing countries where market prices of nontradeables tend to be significantly below those prices in advanced economies. See IMF, n 43, at 8.

[56] Openness is officially defined by the IMF as the annual average of the sum of current payments and current receipts (goods, services, income, and transfers) for a five-year period.

[57] See IMF, above n 55, at 3.

[58] See Leon, above n 54, at 45. Notwithstanding those defects, the compression factor (alongside PPP GDP) is agreed to be retained in the formula for 20 years, then to be revisited. See IMF, n 43, at 12.

[59] IMF, 'IMF Quota and Governance Reform—Elements of an Agreement', 31 October 2010, at 1.

[60] IMF, 'Fifteenth and Sixteenth General Reviews of Quotas—Report of the Executive Board to the Board of Governors' (attaching a Draft Board of Governors Resolution concluding the fifteenth general review of quotas with no increase in quota), 13 January 2020, https://www.imf.org/en/Publications/Policy-Papers/Issues/2020/02/13/Fifteenth-and-Sixteenth-General-Reviews-of-Quotas-Report-of-the-Executive-Board-to-the-Board-49049?sc_mode=1 (visited 15 August 2022).

[61] The Riyadh G20 leaders' communique stated, 'We remain committed to revisiting the adequacy of quotas and will continue the process of IMF governance reform under the 16th general review of quotas, including a new quota formula as a guide, by 15 December 2023'. G20 Leaders Declaration, Riyadh, 21–22 November 2020, para 14.

[62] IMF Board of Governors Resolution on 7 February 2020, https://www.imf.org/en/About/Factsheets/Sheets/2016/07/14/12/21/IMF-Quotas (visited 19 June 2022).

existing formula were discussed in the run up to its own establishment in 2008, and they continue to inform the ongoing negotiation. It is unfortunate that 'deadlines have come and gone, with next to no agreement'.[63]

The negotiation on a new quota formula should focus on the following principles. First, after more than a decade of deadlock, and during which the world economic landscape has experienced a fundamental overhaul, quota adjustments are needed even more urgently than in the case of the 2010 Quota and Governance Reform. The IMF cannot afford another failure inflicting damage to its credibility, effectiveness, and legitimacy. Second, a new quota formula is a prerequisite of the required quota adjustments. For the sake of transparency and predictability, the role of the formula is crucial for guiding quota adjustments, although historical experience shows that factors other than a quota formula were considered. Third, the four principles based on which the 2008 quota formula was developed, as discussed earlier, remain relevant today.[64] To implement those combined principles, the variable of GDP, and PPP GDP in calculating GDP, may deserve a higher weight than that in the 2008 formula. Moreover, replacing the compression factor with an increased percentage of basic votes (e.g. from the current 5.5% to 12%[65]) of the total votes in the IMF would further transparency.

IV. THE DYNAMIC FORMULA IN THE IBRD

At the Bretton Woods Conference in 1944, the sequence of discussing the IMF first, followed by the IBRD, resulted in the IBRD mirroring the IMF, particularly on corporate governance.[66] Until 2010, the method for allocating capital shares to member states in the IBRD had depended on the outcome of IMF quota reviews for much of IBRD's history.

The historical link between the IBRD capital allocation and the IMF quota shares, while serving efficiency and convenience, is not appropriate, mainly because these two organizations have different mandates. Specifically, the IBRD focuses on supporting developing countries' long-term economic development, while the IMF works on the macroeconomic stability of member countries and the international monetary and financial system as a whole. Working toward the equilibrium of member states' balance of payments, the variables in the IMF quota formula capture both members' capacity to contribute to IMF resources and their potential needs to draw from the IMF. In comparison, IBRD members' capital shares have the former quality but lack the latter, that is, they do not determine the lending volume to the members. Particularly, the variables of openness, variability, and reserves in the 2008 quota formula, except GDP, are 'poor proxies' of the relationship between the IBRD and its members.[67]

Thus, in 2010, the IBRD decided to break this historical association with IMF quotas and established a unique formula to guide its own shareholding adjustments under the two-phased Voice Reform.[68] In 2010, a new shareholding formula was used in capital adjustments, which was later developed as the 2016 Dynamic Formula. The practice in 2010 marked the first time

[63] This disappointing quote is from Jakob Vestergaard and Robert H. Wade, 'Still in the Woods: Gridlock in the IMF and the World Bank Puts Multilateralism at Risk', 6 (1) Global Policy (2015), at 4. Kaya's comment sheds light on the reason for the IMF stalemate, '[w]hile the formulae embody economic logic, such technical logic cannot be understood in a sterile manner that excludes politics'. See Kaya, above n 6, at 80.

[64] G20 Leaders Declaration, Los Cabos, 18–19 June 2012, para 33.

[65] The percentage of basic votes out of the total votes in the IMF is less than half of their level at 11.3% in 1944, evidencing deepened inequality among members. See Castellarin, above 53, at 143.

[66] As evidenced, Article V of the IBRD Charter is nearly an exact copy of Article XII of the IMF Charter, both articles being entitled as 'Organization and Management'.

[67] World Bank, 'Repowering the World Bank for the 21st Century' (Report of the High-Level Commission on Modernization of World Bank Group Governance, known as the Zedillo Commission Report, 2009), at 25.

[68] Voice Reform Phase 1, as agreed in 2008, increased the voting power of developing and transition countries (DTC) in the IBRD from 42.6% to 44.1% by increasing basic votes to 5.55% of total votes. Voice Reform Phase 2, as agreed in 2010, increased DTC voice further to over 47.19% by using a new shareholding formula, the basis for the later 2016 Dynamic Formula. Development Committee, 'World Bank Group Voice Reform: Enhancing Voice and Participation of Developing and Transition Countries in 2010 and Beyond' (DC2010-0006/1, 25 April 2010), at 2, 15–16.

for the IBRD to depart from IMF quotas. Besides, the Voice Reform introduced regular shareholding reviews at five-year intervals, the first of which occurred in 2015.[69] The IBRD, unlike the IMF and AIIB, does not stipulate regular shareholding reviews in its Charter. Such efforts all fit into a greater campaign to enhance the voice and participation of developing and transition countries in the Bretton Woods institutions, conducted concurrently and in parallel with the IMF.[70]

In 2016, the IBRD Board of Governors formally endorsed its first shareholding formula, following and building on the first shareholding review report in 2015.[71] The so-called Dynamic Formula aims to achieve an equitable balance of voting power, while avoiding dilution of the voice of the poor and smallest countries.[72] It follows a few technically sound guidelines similar to the IMF's 2008 quota formula, such that the formula should be simple and transparent; broadly acceptable to the membership; and based on readily available, timely, and high-quality data.[73]

The Dynamic Formula has two variables: GDP and IDA contributions, weighing 80% and 20%, respectively. GDP, indicating members' economic weights, is measured as a combination of 60% market rates and 40% PPP rates, corresponding to the IMF and AIIB formulas. The IDA variable, indicating members' contributions to the World Bank's mission of poverty reduction, is measured as a combination of 80% three recent IDA replenishments and 20% historical replenishments to encourage new contributions while recognizing the generosity of past contributions.[74] A compression factor of 0.95 is introduced in the Dynamic Formula, similar to that of the IMF formula, serving to protect the poor and the smallest countries.

The IBRD's Dynamic Formula functions as a guide for each periodical shareholding review and as a starting point for capital realignments, similar to the IMF quota formula. As any capital realignment is a compromise, the Dynamic Formula is not intended 'as the final outcome for such realignment'.[75] For example, statistics show that the progress achieved at the 2018 Selective Capital Increase (SCI) has been reversed, with increased misalignment of 30 beneficiary countries from the SCI by the time of the 2020 shareholding review. Among them, China is misaligned by more than 6 percentage point, the largest ever.[76]

The IBRD decided not to adjust the shareholding in the 2020 shareholding review but to delay the consideration until the next review in 2025. One of the stated reasons was 'the timing of the Review in relation to the agreement on the capital package in 2018',[77] even though at the conclusion of which the IBRD had committed that it cannot replace the 2020 shareholding review. The 2020 review, instead, 'will provide an opportunity to review underrepresentation relative to updated calculated shareholding from the IBRD Dynamic Formula'.[78] Thus, the result of the 2020 review is ironic, and disappointing for those underrepresented member countries.[79]

69 Ibid, at 16.

70 Ibid, at 1, quoting 'Monterrey Consensus on Financing for Development', International Conference on Financing for Development, Monterrey, Mexico, 18–22 March 2002 (para 63).

71 Development Committee, 'Dynamic Formula—Report to the Governors Annual Meetings 2016' (DC2016-0010, 20 September 2016), at 1.

72 Ibid, at 2.

73 Ibid, at 2.

74 Ibid, at 4.

75 Ibid, at 3.

76 Development Committee, '2020 Shareholding Review: Concluding Report to Governors at the Annual Meetings' (DC2021-0008, 28 September 2021), para 10.

77 Ibid, paras 4 and 13. The World Bank's 2018 Capital Package, comprising the 2018 SCI and other reforms, made a US$13 billion increase in paid-in capital to IBRD and IFC, and increased China's voting power from 4.45% to 5.71%, among other achievements. Congressional Research Service, '2018 World Bank Capital Increased Proposal', 14 December 2018.

78 Development Committee, 'World Bank/IMF Spring Meetings 2018: Development Committee Communiqué', 21 April 2018, para 7 https://www.devcommittee.org/sites/dc/files/download/Communiques/2018-06/Communique%28E%29immediaterelease4-21.pdf (visited 16 February 2022).

79 Kaya's comment on IMF quota shifts sheds light on the reason for the IBRD stalemate, 'the largest shareholders tend to prefer modest increases, compared to … some developing countries, which see the quota increase as the basis for … greater voice within the institution'. See Kaya, above n 6, at 66.

With the rapid increase in China's GDP, delaying a new round of shareholding adjustment will increase the misalignment. The USA's tactic of delaying the reform of the IBRD to suppress China's rising influence over it could backfire.[80] While the USA dragged its heels in implementing the Bretton Woods reforms, a disappointed China started to 'walk on two legs', initiating the Belt and Road Initiative and the AIIB.[81] The longer the delay, the higher the disparities, the harder agreement on adjustment and the more the Bretton Woods organizations risk marginalization.[82]

V. SHAREHOLDING DISTRIBUTION IN THE IFC

While the IBRD has the Dynamic Formula to guide its future shareholding reviews, should the IFC deserve a separate shareholding formula of its own, as a sister institution under the WBG, given that the IFC shareholding has a historical link to the IBRD shareholding? The WBG has been considering three main options for adopting a benchmark for future shareholding reviews in the IFC: (i) use IBRD shareholding as a baseline, as before; (ii) use the 2016 Dynamic Formula as a baseline, although it was negotiated specifically for the IBRD; or (iii) negotiate a separate shareholding formula for the IFC to better reflect its distinct private-sector mandate.[83]

Next, we address these three options. First, should the IFC continue to use IBRD shareholding as a baseline? History tells us that it is a Herculean task to anchor IFC shareholding to IBRD shareholding over time because 'the shareholding distribution has diverged to some extent as the frequency and subscription of capital increases have differed, [and] members have joined at different times',[84] and thus, no parallelism between the two institutions has been maintained. The credibility of this option has further lost ground because the IBRD has managed to delink itself from IMF quotas in 2010. Given that the IBRD justified its decision on the ground of distinct mandates, the IFC with a distinct mandate from the IBRD can follow the same path.

The second option is that the IFC uses the Dynamic Formula as a baseline, if it deserves a separate benchmark. As the first option, this one sounds simple and automatic, and even echoes the spirit of 'one WBG'. However, it is technically inappropriate if one considers the two factors in the 2016 Dynamic Formula: only GDP is relevant to the character of the IFC, but the other factor of IDA contributions is out of the scope of the IFC's mandate. Capital distribution in an IFI is primarily decided by the members' economic size, while also being relevant to the organization's purpose, function, and mandates.

At this point the third option seems the only choice, that is, a separate shareholding formula for the IFC different from the Dynamic Formula. But there are concerns regarding this option. First and foremost, the option would violate a 'one WBG approach',[85] since the IBRD already has a shareholding formula. The concern is not genuine because the same people are the representatives on the Boards of Directors of the IBRD, IDA, and IFC, demonstrating the very 'one WBG approach'. The logical conclusion is a 'one Bretton Woods approach', which the IBRD rejected when it broke away from IMF shareholding in 2010. Another concern is that a separate shareholding formula for the IFC requires 'further technical work and negotiation' and continuing the status quo would represent 'a simple and practical approach in line with recent precedent

80 Curiously, if calculated according to the Dynamic Formula, the US shareholding would 'increase' by 1.48%, rather than decrease. See Development Committee, above n 76, at 13.

81 Bin Gu, 'Chinese Multilateralism in the AIIB', 20 (1) Journal of International Economic Law (2017), at 143.

82 Such warning is neither rare nor new. Jakob Vestergaard and Robert H. Wade used to warn acutely against 'further marginalization' of Bretton Woods institutions if the USA kept delaying the shareholding reforms in those institutions. See Vestergaard and Wade, above n 63, at 10.

83 Development Committee, '2020 Shareholding Review: Report to Governors at the Annual Meetings' (DC2020-0009, 16 October 2020), paras 18–21.

84 See Development Committee, above n 76, para 15.

85 The opponents argue that 'separate formulas in IBRD and IFC would imply divergence rather than convergence of the shareholding structures of the two institutions, which is not consistent with a one WBG approach, nor with approaches taken in the past'. See Development Committee, above 83, para 21.

that would provide a solid basis for future reviews'.[86] This argument is no less hypocritical and fictitious.

At the core of the current stalemate is the lack of collective political will over the reform of IFC shareholding. However, this does not mean that keeping the status quo is appropriate. Rather, it risks the IFC's long-term sustainability as shown by the history of IBRD shareholding reforms. Without a rules-based formula, future shareholding reviews in the IFC would be highly political, resulting in longer 'life or death' negotiations, even down to compromises 'at a further than third decimal point'.[87]

A separate shareholding formula for the IFC is not only necessary but also viable. Mainly it should be a GDP-based formula, similar to the one used by the AIIB. This is because, in terms of mandates, the IFC is more alike to the AIIB than to the IBRD. Both IFC and AIIB prioritize private-sector investment,[88] and are free of a concessional loan function similar to IDA. Different from the AIIB, where its GDP-based formula applies separately within regional and nonregional groups, the formula should apply uniformly across member countries in the IFC. A GDP-based formula for the IFC also conforms to the rationale of the 2016 Dynamic Formula because it is tantamount to amplifying the weight of GDP in the Dynamic Formula to 100%, while dropping the other irrelevant factor of IDA contributions. The proposal would 'strengthen the WBG shareholding architecture by putting the shareholding frameworks for IFC and IBRD on an equal footing, in the spirit of one World Bank Group',[89] the ideal shareholding benchmark for the IFC.

The IFC shareholding review should adhere to the Lima Shareholding Principles, which were principally developed to guide the design of the IBRD shareholding benchmark but applicable to the prospective IFC shareholding benchmark discussion, as endorsed by the Governors of the World Bank at the 2015 annual meetings.[90] Particularly, the shareholding reviews should be conducted regularly, at least every five years, and the voice of poor and small countries should not be diluted in the governing body of the organization. Basic votes, as allocated to all members in the same amount, should be increased from the current 5.55% to over 10% of the total voting stock.[91]

VI. TWO-WAY EMULATION BETWEEN THE AIIB, IMF, AND IBRD

As a new multilateral organization derived from the Bretton Woods system, the success of the AIIB has built on its faithful inheritance of (and sincere cooperation with) the IMF and IBRD in terms of corporate governance and modus operandi. In turn, the AIIB's innovative elements have helped to improve of the Bretton Woods institutions. Such mutual emulation is also at work apparent with respect to shareholding formulas.

[86] Ibid, para 21.

[87] Vestergaard describes the shareholding negotiations in the World Bank as 'it took month after month of "24/7" negotiations, and blistered nerves all round, to even get changes of this [microscopic] magnitude, as Executive Directors and World Bank staff searched for compromises "at the third decimal point"'. See Vestergaard and Wade, above n 63, at 6.

[88] The AIIB has a lofty financing target of 50% for private sector projects by 2030. AIIB, 'Corporate Strategy: Financing Infrastructure for Tomorrow' (September 2020), at 27.

[89] See Development Committee, above n 76, para 20(iv).

[90] The Lima Shareholding Principles are (1) regular shareholding reviews every five years based on a dynamic formula, (2) to achieve an equitable balance of voting power, (3) that all voices are important, (4) small and poor countries' voting power not to be diluted, and (5) that shareholding brings both rights and responsibilities. See Development Committee, above n 76, paras 3 and 5.

[91] This level of 5.55% is stipulated in the IFC AOA, Article IV Section 3(a)(i). By comparison, the number of basic votes was set at 250 votes per member in the Bretton Woods institutions in 1944, amounting to an original level of over 10% of the total voting stock. Over time, however, the share of basic votes was eroded with the increase of capital subscription and share-votes allocation. Jakob Vestergaard and Robert H. Wade, 'Protecting Power: How Western States Retain the Dominant Voice in the World Bank's Governance', 46 World Development (2013), at 154.

A. Two-way emulation Between the AIIB and the IMF

Although the IMF is mandated with a function distinct from the AIIB as an MDB, from a historical perspective, the two institutions have common factors, and they may have interacted with and even inspired each other. At the outset, the initiation of the AIIB in 2013 was a backlash against the continued USA hegemony and blocking of reforms in Bretton Woods institutions.[92] Conversely, the establishment of AIIB in December 2015 led the US congress to approve the 2010 Quota and Governance Reform of the IMF immediately,[93] after four years of delay, as discussed in Section III. In 2021, the IMF made a historic program of allocating 650 billion US dollar-equivalent SDRs to members as a boost of global liquidity for post-COVID-19 economic recovery.[94] To benefit developing and least developed countries, as intended by the program, other countries with a strong external reserve position should channel their portion of allocated SDRs to the MDBs, which would effectively enhance the MDBs' lending capacity to the most needy countries. The AIIB is a candidate to be part of this mission.[95]

The AIIB chief negotiators chose a GDP-based shareholding formula, presumably having drawn upon the arduous reform of the IMF's 2008 quota formula, which was initiated after the completion of the 14th general review of quotas in 2010. Some technical deficiencies and weaknesses embedded in the IMF's quota formula had been raised and discussed even in the run up to it and have been retained on the agenda of the ensuing negotiations until today. Among the most controversial issues are whether the GDP variable should have a heavier weight than 50% and whether the PPP GDP deserves a higher percentage than 40% as a measurement of GDP, as discussed in Section III. The architects of the AIIB Charter must have been aware of the IMF's discussion when they were designing their own shareholding formula, as the weight of GDP was increased eventually to 100%, while the 60/40 ratio for market GDP and PPP GDP, respectively, was retained for the sake of consistency.

The AIIB's GDP-based shareholding formula, blessed with the ideal feature of being 'simple and transparent', could inform the ongoing reform of the IMF quota formula. In a prospective new quota formula, the variable of GDP deserves a higher percentage, say 80%, and market GDP and PPP GDP may be blended in a reversed manner, that is, at a 40/60 ratio. If the proposal is adopted, it will affect the AIIB itself, which would probably change the combination of market GDP and PPP GDP correspondingly in the next capital review.[96] The AIIB could be more flexible than other IFIs in doing so, because its measurement of GDP is not even stipulated in a formal, legal document, as discussed in Section II. Such two-way emulation between the AIIB and the IMF should be healthy and sustainable, as it fits the overall purpose of a shareholding formula that reflects members' relative position in the world economy.

B. Two-way emulation between the AIIB and the IBRD

The IBRD, unlike the IMF, may have directly impacted the AIIB's decision to adopt the GDP-based shareholding formula. As early as in the Voice Reform of 2010, the World Bank had

[92] The elaboration of the AIIB's role in correcting the 'unsustainable elements the existing world order' is available at Bin Gu, *The Law and Governance of the Asian Infrastructure Investment Bank* (The Netherlands: Wolters Kluwer, 2019), at 8–10.

[93] Vestergaard and Wade find that the US administration, which had agreed earlier on the IMF reform, conspired in a *de facto* manner with the US Congress in the delay of ratifying it. See Wade and Vestergaard, above n 52, at 292.

[94] IMF, 'IMF Governors Approve a Historic US$650 Billion SDR Allocation of Special Drawing Rights', 2 August 2021, https://www.imf.org/en/News/Articles/2021/07/30/pr21235-imf-governors-approve-a-historic-us-650-billion-sdr-allocation-of-special-drawing-rights (visited 27 February 2022).

[95] Only subscribed SDR holders may be eligible to receive SDRs as channeled to them. So far there are eight development institutions in the official list of subscribed SDR holders in the IMF, including the World Bank, the African Development Bank, and the Asian Development Bank. The AIIB is not currently among them. So, the AIIB needs to obtain the position of a subscribed holder to join the program. IMF, 'Guidance Note for Fund Staff on the Treatment and Use of SDR Allocations' (August 2021), at 38.

[96] The Board of Governors carried out the first AIIB capital review in 2020, which resolved that the capital stock would remain unchanged subject to the next review, currently scheduled for 2025. AIIB Annual Report of 2020, at 18.

designated a weight of 80% to the variable of GDP in capital adjustments and had members' IDA contributions to reflect the other mission of the World Bank—to fight poverty. The World Bank's practice, although lacking a formal formula to support it, possibly influenced the architects of the AIIB Charter during their subsequent negotiations on shareholding distribution.[97] As the AIIB has no such poverty-fighting function as that of the World Bank, there was no need for its chief negotiators to consider members' soft-loan contributions, if any, when designing the shareholding formula; the only remaining parameter was GDP. The choice of a GDP-based formula may have been encouraged by the World Bank's Voice Reform,[98] which served as a justification of emulation for the AIIB as a new bank eager to establish itself and to be recognized in the international community.

Conversely, the establishment of the AIIB shareholding formula up to 2015 probably contributed to the agreement on the 2016 Dynamic Formula of the IBRD.[99] Such proposition of two-way emulation is unsurprising as both Banks have closely interacted. In fact, there are many similarities between the organization of the AIIB and the suggestions of the Zedillo Commission Report on the World Bank modernization in 2009, including but not limited to suggestions on the shareholding formula, as discussed in Section IV.

The continuous success of the AIIB, including its shareholding formula, is likely to influence the IBRD's shareholding review. In particular, China should have a shareholding of over 12% in the IBRD, much higher than the current 6%, following the 2016 Dynamic Formula.[100] Although the Dynamic Formula is 'not for precise allocation of quotas',[101] a capital formula has traditionally served as a guide, a basis, or a point of departure for the discussion on capital distribution, and the gap between 12% and 6% is simply too stark to be ignored. The gap suggests that the implementation of the results of the Dynamic Formula is not satisfactory, and its designated function of reflecting countries' relative economic importance has not been fulfilled. Such failure continues to fail those underrepresented, as seen during the World Bank's 2020 shareholding review, and it undermines the institution's relevance and legitimacy to address global crises.

VII. CONCLUSION AND OUTLOOK

Shareholding formulas have been an effective tool for capital adjustment among member countries in capital-based international organizations. As early as at the Bretton Woods Conference over seven decades ago, such formulas served in negotiations as a starting point, but not as an inflexible mechanism for the precise allocation of quotas. Since then, this role of shareholding formulas has expanded, but with variations across IFIs. Nowadays, shareholding formulas also highlight disparities between countries' calculated shareholding and actual shareholding. For example, if calculated according to the Dynamic Formula, China is even more misaligned and underrepresented in the IBRD, compared with at the time of agreement on the capital package in 2018.

With the aim of reflecting member countries' relative importance in the evolution of the global economic landscape, which has long been the leading principle of any shareholding realignment, a GDP-based shareholding formula and the relevant results calculated are gaining ground. As the Development Committee affirmed in 2003, '[t]he fundamental principle underlying the allocation of shares of the IBRD's capital stock to its members is that members'

97 Lichtenstein, the AIIB's inaugural General Counsel who was engaged in drafting the AOA, recalled that the AIIB Chief Negotiators were '[p]erhaps mindful of these [more than a decade of] World Bank Group discussions [leading up to the 2016 Dynamic Formula]', when recording their own standard of capital allocation. Lichtenstein, above n 11, at 114–15.

98 A group of emerging economies have long advocated increasing the weight of GDP in the shareholding formulas in the Bretton Woods Institution.

99 The AIIB Chief Negotiators' Report on the Charter, where the GDP-based capital allocation formula appears, was adopted on 22 May 2015, prior to the World Bank's 2016 Dynamic Formula.

100 See Development Committee, above 83, at 11.

101 The quote is borrowed from Lowenfeld, above n 44, at 610.

subscriptions should reflect their relative position in the world economy'.[102] The IMF executive directors reported similarly to the Board of Governors on the outcome of the quota formula review in 2013, 'GDP should remain the most important variable, with the largest weight in the formula and scope to further increase its weight. GDP is generally seen as the most comprehensive measure of economic size'.[103] Such a statement has been reiterated repeatedly by both Bretton Woods institutions.

A GDP-based shareholding formula needs to play a central role in allocating capital shares in future, if the relevance and legitimacy of the IFIs are to be preserved and the voice and participation of emerging economies and developing countries in them are to be increased. Statistics show that a dollar of GDP in Belgium is worth five times as many votes as a dollar of GDP in China in the IMF.[104] To correct such inequitable distribution of shareholding (and voting power), GDP deserves a much more prominent place in a new quota formula of the IMF, say a weight of 80%, and the other 20% to indicate other IMF-specific mandates, comparable to the structure of the Dynamic Formula in the IBRD. Moreover, the IFC deserves its own GDP-based shareholding formula to be inspired by the AIIB.

Meanwhile, governance and decision making of IFIs must be democratic and allow for the representation of all members. This means that capital contributions alone cannot be the only source of voice and participation in it. Rather, the result of a capital formula is typically complemented by basic votes, which constitute a minimum voting power for those small and poor countries in the organization. Thus, a fixed percentage of basic votes as in the AIIB, rather than a fixed number of basic votes in other regional MDBs, proves to be a better choice, lest the share of basic votes be eroded with the increase of capital subscription and share-votes allocation over time.[105] Meanwhile, a compression factor is added to the formula in both the IMF and the IBRD to protect small and poor countries; nevertheless, the downside is that it dilutes the principle of 'simplicity and transparency', a hallmark of shareholding formulas. Therefore, the twin institutions may consider replacing the compression factor with a higher fixed percentage of basic votes, say over 10% of the total votes, that is, their initial level in 1944, or 12% as in the AIIB case.

Overall, the relationship between the AIIB and the Bretton Woods institutions exhibits healthy, two-way emulation. This means that the AIIB builds on those traditional institutions, making use of both their positive and negative experiences. Conversely, the vigor and positive outcome of the AIIB produces a stimulus effect and helps to break gridlock in the ongoing reform of those old institutions.[106] For the sake of their respective 'credibility, effectiveness, and legitimacy', the IMF in particular needs a new quota formula to guide the 16th quota review after over a decade of fruitless negotiations. Meanwhile, the IBRD should speed up the implementation of the result of the Dynamic Formula to ease its strained balance sheet, and the IFC should seek to have its own shareholding formula by the next shareholding review in 2025.

102 Development Committee, 'Enhancing voice and participation of developing and transition countries in decision-making at the World Bank and IMF' (DC 2003–0002, 27 March 2003) at 11–12.

103 See IMF, above n 55, at 2–3.

104 The statistics is based on a scenario of 2014, whereby the 2010 Quota and Governance go into effect. Today with the rapid increase of China's GDP, the disparity can only be more than five times. See Vestergaard and Wade, above n 63, at 4.

105 For example, African Development Bank (AfDB) stipulates 625 basic votes for each member, and Inter-American Development Bank (IDB) stipulates 135 basic votes for each member. As share votes increase with capital increases, however, basic votes now represent a smaller percentage of total votes (less than 1%, as opposed to 50% for AfDB and 5% for IDB at the time of establishment respectively). Lichtenstein, above n 11, at 152.

106 Haga observes other impacts made by the AIIB on the reform of peer institutions, which are not discussed in this article. They include the World Bank's and the ADB's reform on lending policy (including their pivot to infrastructure projects), and the IMF approval of the inclusion of Chinese Renminbi in the SDR basket in 2015. See Haga, above n 13, at 414.